
TexasOnline: A Feasibility Report on Electronic Government



Electronic Government
Task Force
November 1, 2000

Copies of this publication have been distributed in compliance with the State Depository Law, and are available for public use through the Texas State Publications Depository Program at the Texas State Library and other state depository libraries.

This plan is available online at <<http://www.dir.state.tx.us/egov/>>.

Department of Information Resources

P.O. Box 13564, Austin, TX 78711

Tel: 512-475-4700 Fax: 512-475-4759



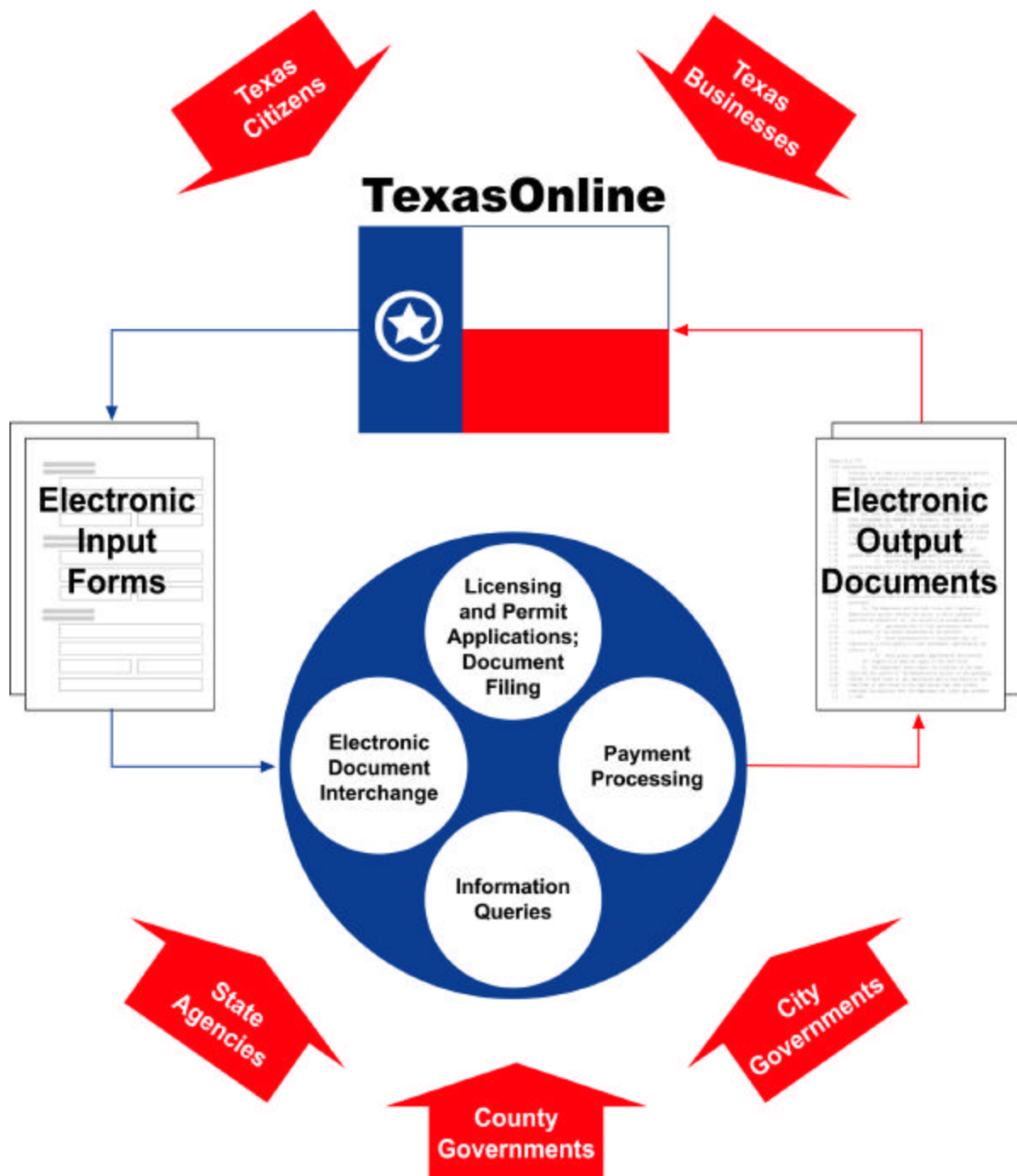
Table of Contents

Vision Statement	2
Executive Summary	3
Realizing the Vision.....	3
Background	7
Establishing the Electronic Government Task Force.....	7
Securing State and Local Government Participation.....	8
Defining the Demonstration Project	9
Critical Success Factors for e-Government	13
State of the State: Electronic Government Initiatives in Texas	15
Report on the Demonstration Project	17
Overview of the Demonstration Project.....	17
Project Descriptions	18
Self-Supporting Model.....	19
Lessons Learned from the Demonstration Project.....	20
Benchmarking Approach.....	21
Benefits and Barriers Identified By The Surveys	23
Introduction.....	23
Lessons Learned from the Surveys	24
Conclusion.....	26
Issues and Recommendations	29
Managing and Operating the Texas Internet Portal.....	29
Seamless Government.....	32
Security	36
Privacy	38
Authentication.....	41
Notary and Third Party Signature Requirements.....	42
Access Issues and the Digital Divide.....	43
Funding Options.....	47
Payment Options.....	52
List of Appendices	55
Glossary	57
Endnotes	63





The TexasOnline Internet Portal





Vision Statement

TexasOnline will provide a single point of access to government information and services that is:

- *Private;*
- *Secure;*
- *Convenient;*
- *Efficient;*
- *Service oriented; and*
- *Accessible.*



Executive Summary

REALIZING THE VISION

“The use of technology is changing the way government does business in Texas. This secure, one-stop Web site – the first phase of Texas’ e-government initiative – provides access to Texas government services 24 hours a day, seven days a week. Visitors can renew certain licenses and certifications, apply for permits, and much more. TexasOnline will enhance Texas government by making it more accessible, efficient, and responsive to all Texans.”¹

Governor George W. Bush

Through the strong support of Governor Bush and the Texas Legislature, TexasOnline has become a reality. More than a Demonstration Project, TexasOnline has established the electronic framework for a new way to provide government services to citizens. In order to achieve the vision for the portal set by the Task Force, much work will need to be done. The continued support of Texas leaders, the cooperation of government at all levels, and the commitment of citizens and businesses to support innovation will be critical as we work to enhance state government through the use of online technologies.

The Electronic Government Task Force (Task Force) has successfully launched the TexasOnline Internet portal (www.TexasOnline.com) to provide a single point for citizens and businesses to access electronic government (e-government) services in Texas. TexasOnline was established under the guidance and direction of the Texas State Legislature and Governor’s Office through Senate Bill 974, 76th Regular Session. TexasOnline demonstrates conclusively that the Internet can be used to:

- Send documents to members of the public and persons who are regulated by a state agency or local government;

- Receive applications for licenses and permits and receive documents for filing from members of the public and persons who are regulated by a state agency or local government that, when a signature is necessary, can be electronically signed by the member of the public or regulated person; and

- Receive required payments from members of the public and persons who are regulated by a state agency or local government.

In the design and development of the TexasOnline portal, the Task Force considered input and information from a variety of sources, including Texas citizens and businesses, State agencies, and other states. Department of Information Resources (DIR) staff conducted research, using information gathered from public and private sector sources from all over the



world, and presented key points to the Task Force and its subcommittees through a number of “white papers” on pertinent topics.

As TexasOnline moved from design to implementation, the Task Force compiled “lessons learned” and applied them to improving the process for delivering services through the portal. The Task Force adopted the approach that TexasOnline would be more than a Demonstration Project, as described in Senate Bill 974. TexasOnline establishes an initial electronic framework for government service delivery through the Internet that encompasses:

- Operations, which includes running the central computers that serve TexasOnline;

- Development, which includes programming the computers to connect government services to TexasOnline; and

- Outreach, which includes:

 - Educating government entities so they can determine how to use TexasOnline to best serve their constituents, and

 - Informing citizens of the services available through TexasOnline and educating them on how to use the portal.

Even with all the work accomplished, much remains to be done. The Task Force has identified a number of issues that must be overcome to achieve the TexasOnline vision and has formulated recommendations to address these issues.

Of the recommendations provided in the *Issues and Recommendations* chapter of this report, the Task Force has found five to be overarching, critical issues that are essential to the long-term success of TexasOnline and electronic government:

- The Legislature should establish a governing body to oversee the implementation, expansion and operation of the portal. This governing body should represent all of Texas and be empowered to set direction and priorities for improvement and expansion of TexasOnline.

- The Legislature should establish a Portal Management Office at DIR to provide staff support for the governing body and to provide for day-to-day management of the portal.

- The Legislature should provide guidance that each state agency must consider the portal for all Web applications that include financial exchanges, “electronic signatures,” or stringent security requirements.

- The Legislature should consider establishing a privacy commission that is authorized to address the growing concerns of both the public and businesses for protection of sensitive information collected by governmental entities that may be shared across the Internet.



State revenue realized from TexasOnline should be designated for operation and maintenance of the portal and to assist in bringing other government entities onto the portal.

Note: TexasOnline.com is the Texas Internet portal for state and local government. Throughout this report the terms TexasOnline and the portal are used interchangeably.





Background

TexasOnline is one of several projects relating to e-government that was initiated by state leaders during the 76th Regular Session of the Texas Legislature. TexasOnline provides a secure technology infrastructure for the innovative delivery of online government services, providing citizens with an additional means for communicating with government, and enabling businesses and individuals to have greater control over how and when they interact with government.

This chapter presents background information on TexasOnline, including an overview of the legislation establishing the Electronic Government Task Force, the efforts of the Task Force in completing a Demonstration Project, and a summary of several other electronic government initiatives in Texas.

ESTABLISHING THE ELECTRONIC GOVERNMENT TASK FORCE

Recognizing the increasing importance of electronic commerce to the state and its potential to increase the effectiveness of government, the Texas State Legislature, through Senate Bill 974, charged DIR with convening and organizing “a task force to assess the current and future feasibility of establishing a common electronic system using the Internet through which state agencies and local governments can accomplish the following types of functions electronically:

Send documents to members of the public and persons who are regulated by a state agency or local government;

Receive applications for licenses and permits and receive documents for filing from members of the public and persons who are regulated by a state agency or local government that, when a signature is necessary, can be electronically signed by the member of the public or regulated person; and

Receive required payments from members of the public and persons who are regulated by a state agency or local government.”²

The legislation further specified that the Task Force, working with DIR, complete a Demonstration Project as a “proof of concept” for electronic government and report on the results no later than November 1, 2000. (For the full text of Senate Bill 974, please refer to Appendix A.)



Working with state leaders in the Governor's Office and the Legislature, DIR assisted in convening the Task Force and provided staff to help accomplish the mission set forth in the enabling legislation.

The Governor appointed the following representatives to the Task Force.

Local Government	Business and Industry	Public Members
Reagan Greer, District Clerk, Bexar County	Robert Handren, Assistant Vice President of Electronic Commerce, United Services Automobile Association (USAA)	Ray Leal, IBT Technologies
Pamela Quinn, Assistant Chancellor of Educational Telecommunications, Dallas Community College District	William Heyer, Chairman and Chief Counsel, Welder-Heyer Energy, Inc.	Richard Pendergast, Director of Travelocity.com Systems, Sabre Travelocity.com
Thomas Ruiz, Mayor, Town of Horizon City	Royce Holland, Chairman and Chief Executive Officer, Allegiance Telecom, Inc.	Gary Thompson, Executive Director, Texas Electronic Commerce Association
Dorothy Stewart, Manager of the Action Center, Fort Worth City Manager's Office		

State Agency Members		
Pat Thomas, Deputy Assistant Secretary of Information Services, Office of the Secretary of State	Ginger Salone, Manager, Information Technology Division, Office of the Comptroller of Public Accounts	Michael Phillips, Director, Texas Department of Economic Development
Donna Cordes, Information Resources Manager, General Services Commission	Jim Gise, Section Manager, Software Development and Maintenance, Information Resources Division, Texas Natural Resource Conservation Commission	Andy Robinson, Associate Commissioner of Information Services, Texas Department of Insurance
Jim Albright, Information Services Director, Public Utility Commission of Texas	Phil Barrett, Director, E-Business, Technology Research and Agency Assistance, Department of Information Resources	

SECURING STATE AND LOCAL GOVERNMENT PARTICIPATION

The Task Force created a subcommittee to work on agency participation in the Demonstration Project. Participation in the Demonstration Project was voluntary. The subcommittee contacted agencies and identified potential government services that could be brought to the Internet to demonstrate the functions described in Senate Bill 974.



Six state agencies initially agreed to participate in the Demonstration Project. The project was designed to demonstrate the ability to do online transactions, including electronic forms and payments, and establish the TexasOnline Internet site and technical infrastructure. The agencies that initially agreed to participate in the Demonstration Project are:

- Office of the Comptroller of Public Accounts (CPA);
- Texas Railroad Commission (RRC);
- Texas Real Estate Commission (TREC);
- Texas Department of Licensing and Regulation (TDLR);
- Texas Department of Insurance (TDI); and
- Texas Natural Resource Conservation Commission (TNRCC).

As the Demonstration Project got underway, there was an increasing amount of interest expressed by other agencies and local governments. While the primary goal was the establishment of the Demonstration Project, it became clear that other government entities were moving ahead with online transaction plans, and needed the ability to participate in TexasOnline before the Demonstration Project phase had ended.

The Texas Department of Transportation (TxDOT) and the Texas Department of Public Safety (DPS) joined the list of participating agencies. Both the motor vehicle registration renewal and driver's license renewal applications were added to the growing list of services to be provided through TexasOnline.

Discussions continue with a number of state agencies and local governments. The positive response to TexasOnline supports the vision established by state leaders through Senate Bill 974. A number of projects are underway to bring additional government services to Texas citizens and businesses across the Internet through TexasOnline. The Task Force recognized early in the process that demand for Internet portal services would expand. The design for TexasOnline anticipates strong demand for growth and has the capacity and capability to expand quickly as new functions and services are brought online.

DEFINING THE DEMONSTRATION PROJECT

In order to help gather information to assist the Task Force in defining the scope of their work and select processes and services that would be part of the Demonstration Project, DIR dedicated the work of a strong cadre of technology analysts to conduct research, develop surveys, summarize findings, facilitate discussion, and support the Task Force. The Task Force organized subcommittees to focus on various issues and to work closely with DIR staff to analyze and develop solutions to thorny technology problems.

The Task Force and subcommittees conducted a wide range of public hearings and participated in electronic government forums and briefings in order to gain a broad understanding of the issues and challenges of establishing a single point of Internet entry for



Texas government services. (The list of persons testifying before the Strategic Issues Subcommittee is provided in Appendix B.) Surveys and focus group sessions were conducted to gather input from Texas citizens, Texas businesses, state and local agencies, and other states. Input from a variety of sources along with research from public and private portal projects around the world was synthesized by DIR staff into a number of “white papers” that described the issues related to electronic government and alternatives for addressing them.

DIR and Task Force members met with agency representatives to identify candidate government processes that could be used to demonstrate the viability of the electronic government concept in an effort to establish the demonstration project.

As the Task Force reviewed results of the surveys and considered other input, the concept of a Texas portal for citizen access began to take shape. The Task Force felt the need to address an infrastructure for e-government that included the single entry point for citizen access, as well as other technical components that would support all Texas electronic government initiatives. To establish the portal, the Task Force issued a statewide request for offer for the development of a “common business portal” as a framework for members of the public and entities who are regulated by a state agency or local government to transact business.

KPMG Consulting was selected, through a competitive procurement process, to implement TexasOnline. The equipment and software supporting TexasOnline are installed at the West Texas Disaster Recovery and Operations Center (WTDROC) and are operated under the oversight of DIR by the WTDROC contractor, Northrup Grumman and KPMG Consulting. TexasOnline became operational in August of 2000.

TexasOnline extends beyond a Demonstration Project in the traditional sense. TexasOnline sets in place a solid foundation for electronic government and offers a fully secure, efficient environment for electronic service delivery. TexasOnline is a long-term structure designed to deliver the levels of access required by citizens of the new, electronic economy, coupled with the technology framework that can be of great assistance to state agencies and other governmental entities with limited budgets or with a lack of properly trained information resource staff members.

TexasOnline is much more than a Web address on the Internet. TexasOnline is a fully operational, secure Internet framework that provides a number of technical services that can be used by any government entity without duplicating the technology (and costs) at each location. TexasOnline includes:

- A single point of entry for Internet-based government services in Texas which is available around-the-clock, accessible to everyone regardless of location, and includes an intuitive look and feel which blends the various levels of government into a “one-stop shopping” portal for Texas citizens and businesses;

- Common, scalable hardware, software, and telecommunications capabilities that can be shared by all state and local government entities;



A common, flexible payment processing system with integrated reporting features into government accounting systems;

Technical assistance to government entities in bringing services to the Internet;

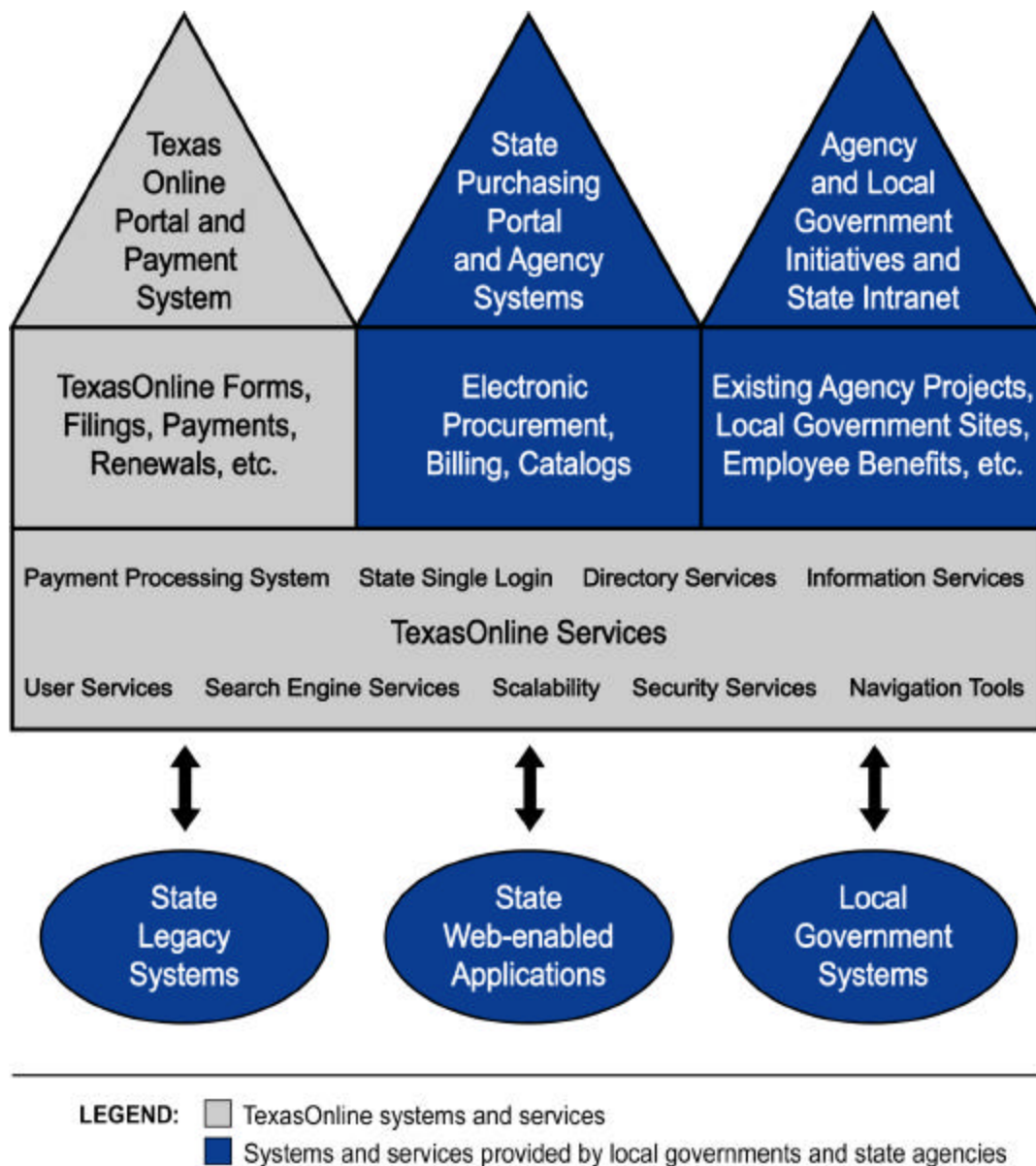
Marketing and outreach services to and for the various levels of government using the portal;

Around-the-clock security monitoring and a secure Web environment;

An around-the-clock call center providing citizens with help and assistance in using the portal; and

Government services in Spanish and English.

Figure 1: Texas Electronic Government Initiatives illustrates the technical components of TexasOnline and their relationship to the various initiatives and projects underway throughout state government.

**Figure 1: Texas Electronic Government Initiatives**



CRITICAL SUCCESS FACTORS FOR E-GOVERNMENT

With the advent of the Internet, businesses have moved rapidly to bring products and services online, providing access to consumers and trading partners on a 24-hour, 7 days-a-week basis. The rapidity of the change has generated expectations for service and availability that are challenging governments to meet a new standard of performance. Organizational roles, the technological capabilities, and the successful practices of the new economy are offering governments opportunities to improve service and performance that were unthinkable just a few years ago.

Getting Started

State and local governments may have thousands of services that could be provided through the Internet. Over the next few years, libraries of valuable public information will be available with the click of a few buttons from almost any computer anyplace in the world. In order to provide a logical structure for access to electronic government, it is important to adopt a manageable approach to Internet services that begins with development of a single point of access, an electronic portal where citizens, businesses, and other governments can find what they need efficiently. Government portals must be built on a technical architecture and standards, creating a starter set of key online services that can be used by different entities with a common constituency to rapidly bring services online. The National Electronic Commerce Coordinating Council (NECCC), in an effort to begin developing the framework for common Internet standards, has set forth a definition of the five levels of e-government portals.

First level: delivers information in a way that is easy to use so citizens can find the information they need quickly. The NECCC estimates most governments are already at level one or are taking steps to reach level one soon.

Second level: citizens and businesses can perform simple transactions such as requesting a form or paying a parking ticket online. Because the Internet is so new, there is only a small selection of services available online through government portals at this level. The NECCC estimates that 15 to 20 percent of governments will at this level by the end of 2000.

Third level: provides seamless access to a multitude of public services, requiring collaboration among organizations, and allowing the public to move between government transactions without re-entering information such as individual identification. The NECCC predicts that some government entities may be able to realize this level by 2001.

Fourth level: draws the information needed for transactions from existing government sources, requiring that most of the government's databases become interactive and interface with each other. On a fourth level portal, for example,



citizens can change their address with all relevant government organizations with a single entry of the new information.

Fifth level: provides intricate personalization for citizens and businesses by customizing the subject areas of interest to the specific needs of the consumer. These subject areas are called “channels” or “life events.” For example, a “car channel” might provide individuals with ready access to car registration, their history of traffic citations, their insurance company’s rating, and recall notices on their cars. Furthermore, the portals of this level can assume an active role, by contacting individuals via pager, cell phone, or e-mail to provide updates on street or freeway conditions or reminders to update car registration. According to the NECCC, fifth level portals are not expected until 2002 or 2003.³

The Critical Issues

There are a few general principles behind any successful e-government strategy. These new basics of government include:

- Focus on the customer, not the government agency. Make all access to information so that a citizen does not need to know what state or local government entity is responsible for a given function.

- Promote private sector partnerships. Combine performance features from both public and private sectors to gain the most efficiency possible.

- Re-engineer government. Do not just automate it. Be sure that services are provided to the constituents in the most effective and efficient manner possible.

- Improve education and learning for everyone from the citizen to the government employee to leadership.

- Protect privacy and provide security for sensitive information. Governments must balance the need for privacy *of* the citizen with the need for information to provide services *to* the citizen.

- Act now and adjust along the way. Service delivery systems must be created quickly and efficiently.

Government faces additional challenges due to the public trust it must uphold. In addition, government must address the following critical issues:

- While private industry can release information at will, the State of Texas distributes and sells data as the law permits. For both financial and non-financial information, people expect the government to safeguard the public’s interests. According to Texas citizens surveyed, paying for e-government services through the sale of personal data is unacceptable.



The two factors that seem to be most influential in determining whether the public finds e-government services appealing are the perception that service improves over the Internet and that services are provided quickly, eliminating “wait” time.

While a signature can be replaced by the use of secure electronic identification, requirements for third party documentation are harder to fulfill using the Internet.

E-government is still a relatively new concept. Education/awareness regarding options and alternatives will be necessary to gain agency and university participation.

STATE OF THE STATE: ELECTRONIC GOVERNMENT INITIATIVES IN TEXAS

The establishment of the Task Force is only one of several initiatives relating to e-government that have been instituted by state leaders. The Demonstration Project is being developed simultaneously with other projects to help insure that TexasOnline addresses the common issues that cross these electronic government initiatives. The other major electronic government initiatives that are underway in Texas are introduced below.

Lt. Governor’s Advisory Council on the Digital Economy

Lieutenant Governor Rick Perry created the Advisory Council on the Digital Economy in an effort to keep Texas at the leading edge of high-technology research, development and job creation. He assembled a group of high-tech entrepreneurs and leaders to examine technology issues, including workforce development, taxation, regulation, education and e-commerce in Texas.

e-Texas

The e-Texas initiative was created to find ways to help Texas state government meet the challenges of the Internet Age. Founded by Texas Comptroller Carole Keeton Rylander, e-Texas teams private-sector commissioners and task force volunteers with Texas Performance Review staff in a unique public-private partnership. Commissioners will be able to bounce ideas off some of the leading policy minds in Texas government, while state government can learn from the individuals who are literally transforming business and society. The Commission’s charge states: *Texas Government for the new era should cost less, provide better service, and be more responsive to the citizens who pay for it.*



Texas Government to Business Coordinating Council

The 75th Texas Legislature passed Senate Bill 820 (Texas Government Code, Title 10, Subtitle D, Sec. 2177) which charges the General Services Commission (GSC) with establishing and operating an electronic procurement marketplace, including an electronic commerce network. The GSC formed an electronic commerce task force, the *Texas Government to Business (TxG2B) Coordinating Council*, and awarded the Electronic Procurement Pilot Project to Syscom, Inc., of Baltimore, Maryland. On April 3, 2000, the first electronic procurement transactions were processed. The transactions were placed through the Web-based electronic procurement system using the Internet.

Electronic Benefits Transfer Task Force

The Interagency Task Force on Electronic Benefits Transfer (EBT), chaired by the Comptroller of Public Accounts, coordinates the state's EBT activities. It helps state agencies that are planning to add new benefit programs to the state's current EBT system.

The EBT Task Force is looking at combining Electronic Service Delivery (ESD) into the electronic Lone Star card. ESD is defined as a broad concept that encompasses the use of advanced automation technology to deliver a variety of services that include:

- TIER 1 – cash benefits (e.g. Food Stamps or Temporary Assistance for Needy Families (TANF));
- TIER 2 – benefits with cash value (e.g. Women, Infant Care (WIC)); and
- TIER 3 – information (e.g. Health data).



Report on the Demonstration Project

This chapter describes the scope, objectives, status, and “lessons learned” from the Demonstration Project, including an overview of the Project, and agency services included in the initial version of TexasOnline. This chapter also provides an overview of the Benchmarking Methodology the agencies will use to determine the relative efficiency and effectiveness of electronic government for those services offered through TexasOnline, compared with other traditional service delivery methods.

OVERVIEW OF THE DEMONSTRATION PROJECT

When they adopted Senate Bill 974, Texas leaders set forward specific objectives to expand the availability of government services to citizens through the Internet. The overall goal of the project is to make Texas government services available online, anytime, from any location. The specific focus of the Demonstration Project includes:

- Documenting interchange between citizens, businesses, and government;
- Providing applications for licenses, permits, and business establishment; and
- Receiving payments for government services through the Internet.

In order to accomplish the objectives of the Demonstration Project the Task Force designed TexasOnline to:

- Help government bring their services to citizens via the Internet.
- Allow citizens to securely pay for services with commonly used methods, such as credit cards, checks, and debit cards.
- Provide customer service and personalization that will make citizens comfortable using the portal and attract citizens to return to the portal.

The Task Force expects that, as services through TexasOnline are expanded and accepted by Texas citizens, state and local agencies will realize benefits through improved efficiencies. Resources can be redirected to the direct, person-to-person services that will always be an essential element of the work of government.

More importantly, citizens and businesses will realize direct benefits in timesaving, convenience, and cost savings as government services become available through TexasOnline.



PROJECT DESCRIPTIONS

Detailed descriptions of projects involved in this demonstration effort are listed below.

	Description	Agency
Services:		
Franchise Certificate of Account Status (COAS)	One of the CPA's responsibilities is to certify that businesses are in good standing for the state franchise tax. Obtaining a certificate or just verifying that a business is in good standing is a very frequent and time-consuming request. The COAS provides the ability to determine franchise tax status and generate an actual certificate of account status via the Internet.	CPA
Insurance Agents Data Search	Insurance companies and other interested parties can review licensed insurance agent information.	TDI
Sales Tax Filing and Payment	Taxpayers will now have the ability to file Sales Tax short form returns with tax due and make their payment using a credit card or electronic funds transfer via the Internet. The user will enter the primary tax return data and the application will calculate the amount subject to tax and tax due.	CPA
TDI Newsletter Subscriptions	Insurance agents, companies, and other interested parties can use the Internet to subscribe to TDI newsletters.	TDI
TNRCC Event Registration	TNRCC hosts over 20 major events annually around the State of Texas. The public will be able to access this service for online registration to selected events. In addition, exhibitors will be able to pay fees for participation in the event using the online service. Users will be able to select an event and a location to register for. They will be able to register multiple attendees with a single payment.	TNRCC
License/Certification Renewals:		
Air Conditioning/Refrigeration Contractors	Air conditioning and refrigeration contractors now are able to renew their licenses online using credit cards.	TDLR
Insurance Agent	Licensed insurance agents are able to file their renewals and renewal fees online using credit	TDI



	cards.	
Landscape Irrigation Installers Certification Renewal	Landscape irrigation installers will be able to renew their certification online. The service will allow a single user to select multiple installers for renewal with a single payment. Reporting of training will also be provided.	TNRCC
On Site Sewage Facilities Installers	Currently certified installers will be able to renew their certification online as well as the certification of their apprentices. They will also be able to report new training hours to the agency.	TNRCC
Real Estate Agent	Licensed Real Estate sales persons now have the ability to file their renewals and renewal fees online, using credit cards.	TREC
Real Estate Broker	Licensed real estate brokers now have the ability to file their renewals and renewal fees online, using credit cards.	TREC
Permit/Fee Payments:		
Municipal Solid Waste Fees	Entities responsible for paying quarterly municipal solid waste disposal fees will be provided online bill presentment and payments. Authorized representatives of the organization will be able to view the current fees due and selectively pay line items.	TNRCC
Electronic Compliance and Approval Process	This service allows oil and gas operators to apply for drilling permits and submit all required information in a digital format over the Internet. Fees can be paid using a credit card.	RRC
Toxic Release Reporting (TRI) Fee Assessments	Industrial organizations responsible for paying toxic release annual fee assessments will be provided online bill presentment and payments. Representatives of the organization will be able to view the current fees due and selectively pay line items.	TNRCC

SELF-SUPPORTING MODEL

TexasOnline is designed to be a self-supporting entity that can be expanded and operated without specific appropriations from the Texas Legislature. In general, a “self-supporting” portal can encompass one, some, or all of the following funding options:

Agency subscription fees;



Resale of data;
Customer transaction/convenience fees;
Premium services;
Payment processing fee by transaction; and
Advertising.

At present, TexasOnline is funded through transaction/convenience fees and, where agencies have resources that can be dedicated to Internet development, agency funding sources. At this point, the Task Force cannot determine if this funding model will be sufficient to support the expansion and improvement of e-government services through TexasOnline. This issue is discussed in more detail later in this report in the Funding Model section of the *Issues and Recommendations*.

LESSONS LEARNED FROM THE DEMONSTRATION PROJECT

The Task Force, working closely with the state and local government entities that are participating in the Demonstration Project and DIR, identified a number of “lessons learned” that have been already applied to the process of bringing government information and services to citizens through the Internet. The Demonstration Project also helped clarify a number of issues related to this new venue for government service delivery.

On-going governance of the portal will be critical to ensure consistency, security, and efficiency.

Coordination and communication among agencies and across levels of government will be essential to realize the full potential of the portal to break down barriers to efficient government services.

Using credit cards will be new to many agencies, and their use will require changes in current fee structures. Agencies may not have the authority and flexibility to address credit card fees within the current authorizing legislation;

Fees related to accepting payment over the Internet will include charges such as sales tax (in some cases) and electronic funds transfer costs. Agencies and local governments will need authority to address these additional costs in an appropriate manner.

While a number of information services can be provided through the portal at no charge to the public or businesses, increased use of TexasOnline to complete financial transactions will be essential to the economic viability of the portal.

Security standards must be enforced for all state and local entities that provide services through the portal.



Agencies' current rules and policies may limit their ability to bring their services onto the Internet, and in many cases small changes to eliminate these barriers will suffice.

The public's growing concern for privacy must be addressed to increase use of the portal and improve responsiveness of government.

The use of digital signatures to authorize transactions over the Internet is a complicated issue. Government entities will need to review their policies and statutes to determine what is allowed and what changes will need to be made in bringing their public services to the Internet. In some cases, requirements for signature and/or authentication can be eliminated.

Mechanisms to accept third party signatures or forms are not available.

Transactions that require a notary or other witness must be examined to determine if the requirements can be modified to accept electronic authorization.

Single face of government will have to be balanced with the advantages of recognizing the individuality of the respective local jurisdictions and state agencies.

Limited resources will require government to prioritize services that can be provided on the Internet, and to develop plans for bringing the services online.

Outreach is necessary for both the providers of electronic government services and the citizens and businesses that use them. Government entities will need to be educated and trained on how they can best use TexasOnline to serve their constituents. Citizens will need to be informed on the services available through TexasOnline, and must be educated on how to use the portal to access those services.

The issues and the Task Force recommendations for addressing these issues are discussed further in *Issues and Recommendations*.

BENCHMARKING APPROACH

As part of the effort to determine the potential cost/benefits from the use of the portal, the Task Force sought input from a number of both public and private sources on the impact of service delivery over the Internet. While private businesses can structure their business to take full advantage of the Internet, government must continue to provide services in the traditional modes; the Internet is an additional way to deliver services, not the only way. In the future, government may offer some services only through e-government channels, but that transition is not expected to occur for several years to come.

Because the delivery of government services across the Internet is new, there is little empirical data to support the assumption that electronic government will reduce the overall cost of government. There are some initial reports of cost savings for specific examples of service delivery through the Internet that are encouraging.



In Alaska, the traditional vehicle registration process was a two-week process that cost the state \$7.50 per transaction to handle the paperwork. With the state's new online procedures, the cost has been reduced to less than \$1 per transaction, and the time has been shortened into a 15-second process.

In New Jersey, early indications are that the Department of Environmental Protection has condensed the turnaround on its air permits from six weeks to six minutes with their new online permitting and payment system.

Arizona's new online registration and renewal system for the Motor Vehicle Division (MVD) allows citizens to renew their registrations online 24 hours a day, seven days a week at no extra charge to the citizen. Processing online requests costs only \$1.60 versus \$6.60 for a transaction to be completed at the walk-in counter. With Arizona now processing 15% of their renewals online, the MVD will save around \$1.7 million a year.

The primary goal of benchmarking is to identify quantitative measures that may show improvements in areas such as increased speed of the transaction and employee productivity. As the benchmarking results and other statistics – including those that recount the frequency TexasOnline is accessed – become available, the Task Force will report them to the Legislature and other government leaders.

It is clear that government entities that are using the portal have already realized some benefits from “economies of scale” such as:

- Standard security infrastructure that does not have to be repeated from site to site; and

- A standard payment process that was developed one-time for all agencies and government entities to use.

With these (and other) cost savings related to “economies of scale” and the benefits to citizens and businesses of increased convenience and responsiveness, TexasOnline has already proven that it can fulfill the goals established in Senate Bill 974.

Additional information gathered on the perceived benefits and barriers of e-government is contained in the following chapter, *Benefits and Barriers Identified by Surveys*.



Benefits and Barriers Identified By The Surveys

In October of 1999, the Task Force initiated a series of surveys as part of the process to define the scope, services, and structure of the portal. The surveys were structured to gather information on the nature of e-government approaches to implementing electronic service delivery through the Internet, and conceptions and expectations of the prospective administrators and users of a portal. The information gathered through the surveys was instrumental in helping the Task Force define the Texas portal and address issues regarding its use. This chapter presents the benefits and barriers that are perceived by the subjects of the surveys.

INTRODUCTION

In the course of determining the feasibility of e-government for Texas, the Task Force collected information on all aspects of the initiative. The goal was to gain information from four different perspectives—Texas citizens, Texas businesses, Texas state agencies and universities, and other states. In order to accomplish this goal, surveys were distributed to each of the four areas. These four surveys were the E-Government Services and Computer and Internet Use in Texas, the Texas Business Executive Survey, the Survey of State Agency Initiatives, and the Survey of State Portal Initiatives.

The E-Government Services and Computer and Internet Use in Texas survey focused on the expectations and concerns of Texas citizens. The survey focused on access issues - particularly in rural areas, Internet use, funding issues, and attitudes towards the Internet and using it for e-government services. Broadband services in rural Texas, privacy and security matters, and the nature of Texas' digital divide are addressed in this study. The survey was conducted in March-April 2000 using telephone interviews with 1,002 respondents. Of those, 800 comprise a random sample survey of households in the state, while an additional 202 households were exclusively from rural counties. The Telecommunications and Information Policy Institute of the University of Texas at Austin conducted the survey. The analysis of this survey can be found in Appendix C.

The Texas Business Executive Survey examined corporate use of the Internet. The information was analyzed to determine what the business community thought about providing information and government services to the companies through the Internet and other communication technologies. The survey addressed such things as access, dependency, and use of the Internet for business; Internet concerns in the workplace; and preferred



funding methods. The survey was conducted between July 21 and August 2, 2000, and involved 331 business executives in Texas. The sample was drawn randomly from all businesses with 100 or more employees. A special effort was made to reach as many minority and woman-owned firms as possible. Hill Research Consultants located in The Woodlands, Texas, conducted the survey. The analysis of this survey can be found in Appendix D.

The Survey of State Portal Initiatives examined the e-government initiatives of other states across the nation. Some of the issues addressed included approaches to portal governance, portal frameworks, public-private partnerships, portal services, and methods of assessing cost-benefit. The survey also focused on end-user needs, access, privacy, and security issues. The survey also incorporates research on national trends related to e-government and state Web portals. Surveys were e-mailed to representatives in 20 states which were selected, based on their known experience with portal projects or because they share similar characteristics as Texas in terms of government structure, population size, and demographics. Completed surveys were received from 16 out of 20 states. For states that did not return a survey form, researchers reviewed state Web pages and also made telephone calls to key individuals for additional information. After reviewing the survey responses, all states were contacted and interviewed by telephone to glean additional qualitative information about various aspects of these portal projects. The Department of Information Resources conducted the survey. The analysis of this survey can be found in Appendix E.

The Survey of State Agency Initiatives was designed to examine the benefits of and barriers to state agency participation in online government. This included identifying and prioritizing the needs of agencies related to their participation in online government as well as determining the extent of agencies' progress in providing information and services using the Internet. Additionally, the survey helped to determine which agencies and applications are "ready-to-go" on the state portal. The survey was e-mailed to Executive Directors and Information Resource Managers of all state agencies and universities. Formal responses were received from 156 state agencies and universities. The Department of Information Resources conducted the survey. The analysis of this survey can be found in Appendix F.

The results of these surveys provide a candid glimpse into the hopes held for technology by individuals in both the public and private sectors. The results also reveal the concerns held by these same potential stakeholders and users of TexasOnline.

LESSONS LEARNED FROM THE SURVEYS

In conducting the surveys, the Task Force identified several lessons learned.

Citizens and businesses prefer using advertising or charging the people who use electronic services to pay for e-government.

The general public is not supportive of paying for e-government through sale of personal or transactional data or using revenues from general funds. Businesses



echoed these opinions and suggested that subscription services are preferred over transaction fees.

E-government is an ongoing, evolutionary process.

States that contract their portal to the private sector have a shorter initial startup phase.

Not all citizens have access to the Internet.

Internet access is more expensive in rural areas. Texans who are poorer, older, or African American or Latino are less likely to use computers and the Internet. When planning TexasOnline, the Task Force took into account populations that may be the least able to use the new services and considered alternative strategies to resolve accessibility issues.

Texans are sensitive to the privacy and security concerns related to using the Internet.

The survey results underscore the idea that people would prefer some level of control over how personal information is handled by government. People overwhelmingly prefer an “opt-in” strategy of safeguarding the use of data about themselves: they strongly prefer to give permission ahead of time before such information is released by government. For both financial and non-financial information, people expect the government to safeguard the public’s interests regarding the use of personal information. This need for privacy and security must also be balanced with open government requirements.

Barriers to agency participation in online government include: not enough staffing, increased labor costs required to support implementation, equipment costs, and lack of staff technical expertise.

Agencies and universities have different needs and concerns depending on their size, type of online application, budget and staffing. TexasOnline assists agencies in overcoming these concerns.

Third party documentation requirements for some government transactions, such as transfer of title, present a challenge that has not yet been resolved through the Internet.

Agencies have legislative mandates or internal rules requiring such documentation. The individual processes will need to be examined on a case-by-case basis by each agency to assess current validation requirements and determine how online transactions impact those procedures. There may also be a need for legislative changes that would allow agencies to eliminate required signatures on documents where the signatures are not validated as part of the transaction.

There is no unified vision for online or e-government services across states, partly because e-government is so new, and also because its benefits and costs are not yet clear.



States are just beginning to identify some underlying benefits including: convenience, greater access to information, and the potential to reduce costs of individual transactions. Little information is available about the real costs at both the enterprise and agency levels of states' e-government initiatives. There is also little available evidence concerning cost savings due to state Web portals.

Coordinating activities among agencies and various levels of government is required in order for e-government to work smoothly from an enterprise perspective.

States reflect a blend of oversight, governing and management structures. The most cohesive models, however, are being led by bodies with a strong mandate and the authority to carry it out.

Agencies perceive that the greatest benefit of online government to the state of Texas is the availability of government services from any location.

Other perceived benefits of online government included: reduced transactional costs, reduced postal costs, reduced paper expenses, reduced costs of handling checks; and increased revenue-generating potential for the agency.

The most potentially appealing e-government services include:

- Conducting criminal background checks on potential new hires;
- Reviewing job lists for finding potential employees;
- Submitting license and permit applications online;
- Tracking current and proposed laws and regulations;
- Renewing driver's licenses;
- Registering to vote;
- Voting in an election;
- Filing and paying taxes; and
- Enrolling in educational programs.

CONCLUSION

The benefits suggested by providing government services in an online setting are quite appealing, especially in terms of improved, efficient, and effective service delivery for the state and increased convenience for the general public.

This new way of conducting state business will not be without its difficulties. This chapter has presented some of the perceived barriers identified by Texas citizens and businesses, other states, and Texas state agencies.



Online government will not replace current methods of service delivery, such as e-mail, forms, mail and person-to-person interactions.

Some of the impediments will be intractable, many will be easily overcome, and still others may exist only in perception. Regardless, each barrier will have to be addressed to ensure the success of TexasOnline. The Task Force considered the information gathered through the surveys, public testimony, and broad-ranging research in defining TexasOnline. The issues and concerns reflected by the survey participants provide a foundation for the formulation of the recommendations described in detail in the next chapter, *Issues and Recommendations*.





Issues and Recommendations

The issues and recommendations are organized into the following broad categories: Managing and Operating the Texas Internet Portal; Seamless Government; Security; Privacy and the Privacy Commission; Authentication; Notary and Third Party Signature Requirements; Access Issues and the Digital Divide; Funding Options; and Payment Options.

Each recommendation is prefaced by a code indicating the specific government body the recommendation most concerns:

LEG – These are recommendations that require legislative action in order to be implemented;

STATE – These are recommendations that can be implemented through state agency action; and

TF – These recommendations require Task Force initiatives for setting portal policies and standards.

The recommendations are numbered sequentially for ease of reference.

MANAGING AND OPERATING THE TEXAS INTERNET PORTAL

Government entities at all levels within the State of Texas are working to find ways to use innovative Web technologies to improve communication and customer service. While many benefits can be realized through online government, new and unexpected technical and policy issues are arising due to the size, newness, and complexity of this initiative.

The Task Force has been assigned the task of assessing the feasibility of establishing a common electronic system for conducting state and local government activities over the Internet. The Task Force's commission expires August 31, 2001. There is no committee or group that has been designated to operate past this date to see the TexasOnline into its next stages.

In order to fully realize the potential benefits that can be offered to both state and local government through TexasOnline, a permanent structure must be put in place to oversee the expansion and evolution of the portal. This will require planning and oversight across and



among the various levels of government. It will also require a high level of cooperation among state and local governmental entities.

E-government has brought about a shift (from multiple organization management to statewide management and access) in the way government conducts business. New policies, procedures and statutes are required to address online government. In administering government portals, there are three basic models emerging among the various states:

Quasi-Governmental Body Oversight

Since the portal serves as a comprehensive gateway to all state agencies, boards, commissions, and in some cases local governments, some states are establishing an independent board or commission to address policies, oversight, and funding issues related to “single points of entry” or Web portals. This body contains representation from all stakeholders and governments at all levels.

State Agency Oversight

In states where government is highly centralized, oversight and management of the portal is under the auspices of a Chief Information Officer or the administrative agency for the state.

Leadership Oversight

In some states, a special office or group has been established, usually within the Governor’s Office or as an adjunct to the legislative branch, for oversight of the portal and other e-government initiatives.

Because of the unique and decentralized nature of Texas state government and the desire to expand the use of the portal to cities, counties, and other political subdivisions, **the Task Force recommends the creation of a portal oversight structure that incorporates aspects of all three models.** Based upon the Survey of State Portal Initiatives, a governing body is critical to the success of a portal.

Recommendations

- 1. (LEG) The Legislature should establish a governing body to oversee the implementation, expansion and operation of the portal.** This governing body should represent all of Texas and be comprised of (a) members from state legislative leadership, (b) the Governor’s Office, (c) state agency and university representatives, including representatives from the Office of the Attorney General (OAG), CPA, DIR, and State Auditor’s Office (SAO), (d) members from county and municipal governmental entities, (e) representatives of the Texas business community, and (f) members of the general public.

DIR should provide administrative support and fiscal oversight for the governing body. The DIR Board should provide a forum for rulemaking as well as the necessary management controls to insure the appropriate oversight for the use of public resources. The duties and responsibilities of the governing body would include:



Developing policies related to governance of the portal, including, but not limited to, security, authentication, and implementation.

Preparing rules and regulations for operation of the portal to be enacted through the rule-making authority of the DIR Board.

Approving initiatives for the agencies and local governments that use the portal.

Conducting outreach to state agencies, local government entities, the business community and the public to promote portal use.

Overseeing contracts with and performance of business partners involved in the operation of the portal.

Overseeing funds generated for operation and expansion of the portal.

Developing pricing guidelines and policies for both state and local government.

Providing an annual update to the Legislature, Governor's Office, and the SAO, as well as to key stakeholders, regarding the portal status, progress, benefits, and efficiency gains.

Evaluating portal projects to gain an understanding of the improvements achieved in performance efficiency. This will provide a baseline of benefits data that can be used to evaluate other opportunities to enhance government service delivery through the Internet.

Note: Recommendations in this report that are designated for the new governing body are being addressed, during the interim, by the Task Force.

2. **(LEG) The Legislature should establish a Portal Management Office at DIR to provide staff support for the governing body and to provide for day-to-day management of the portal.** The Portal Management Office should report administratively to DIR while assisting and supporting the new governing body in administration of the portal. Duties and responsibilities of the Portal Management Office should include:

DIR, through the Portal Management Office, should serve as the governing body's fiscal and administrative agent.

Implementing the policies, rules, and procedures adopted for portal operation.

Developing standards for services and systems offered through the portal (security, authentication, application interfaces, application appearance, Web content, etc.).

Day-to-day contract management and performance monitoring of the business partners that operate the portal.

Assisting agencies and local government entities in bringing services and systems onto the portal.



Assisting agencies and local government entities in researching and identifying potential funding sources, developing grant application materials, and seeking specialized funding for Internet projects.

Assisting the Legislature and state leaders in technical coordination of electronic government initiatives.

Developing policies and procedures (for approval of the new governing body) to help ensure that all Web pages accessed through the portal have the following characteristics:

- The same look and feel for navigational purposes (and for consistency with existing Web standards);
- An insignia or icon (branding) that helps identify pages as part of the secure state portal, TexasOnline; and
- Links across government boundaries, where needed, so that citizens, businesses, and other portal users can make smooth transitions across governments without needing to know the specific entities and/or systems.

Coordinating operations between various levels of government to achieve integrated planning

Implementing and negotiating approved policies, guidelines, standards, pricing, and other directives.

SEAMLESS GOVERNMENT

The goal of seamless government is to make government information and services readily available to all citizens at all times in a way that emphasizes government as an “enterprise,” not a bureaucracy. Government as an “enterprise” (statewide services across all governmental entities) removes the barriers and delays associated with the need to work with different agencies at different levels. Government is seen as a service provider that is centered on the needs of citizens and businesses, not the political and organizational infrastructure.

This vision can be realized in two steps: first, by moving as much information and as many services online over the Internet as possible; and second, through cooperative, integrated planning among and between state and local governmental entities.

In adopting Senate Bill 801 (76th Legislature), state leaders recognized the need to move government information and services to the Internet. (For the full text of Senate Bill 801, please refer to Appendix G.) This legislation anticipates the need to link and connect information from the citizen’s perspective, not the agency perspective, and to provide basic mechanisms for communication and interaction across the Web.

Seamless government will present a single, function-driven face to the public. To present a single face implies “one-stop shopping”. In an effort to identify all the associated Web-



pages a method called “branding” has been instituted. *Branding* means that each Web page has an icon or symbol displayed on it to identify the Web page as a part of the components of a system. The icon is referred to as the brand. Each page that has this brand is expected to have the same level of security and privacy as the home page of the application. In the case of TexasOnline, branding means the Web pages will:

- Have a united form of navigation throughout the portal and other government links to the greatest degree possible; and

- Have a comfortable sense of security that all linked sites are indeed from the state or local government and these sites support and/or identify the level of privacy that can be expected.

Additionally, Web pages that are function-driven create ease-of-use, i.e., citizens need only know *what* they want to do (e.g., obtain a birth certificate or renew a driver’s license), not *who* they must contact to do it (e.g., County Clerk, State Health Department, DPS, etc.). This method of selecting functional tasks is called vertical planning.

While many benefits will be gained through seamless online government, issues inevitably arise due to the size, newness and complexity of the initiative. There are three major issues associated with seamless government:

- Coordination across government boundaries;

- Promoting the use of the portal among state agencies; and

- Portal awareness across Texas.

Coordination across Government Boundaries

Texas government has a decentralized framework with independent operations being conducted among various government entities. Governmental bodies compete for such fundamentals as funding and control/approval authority for decisions related to application and functional design.

Currently, governmental entities within the state of Texas design their own service delivery infrastructures and Web application appearances based on internal standards. Even though DIR has adopted standards for state government Internet Web sites (1 Texas Administrative Code 201.12), Texas governments at the state and local level have not adopted and do not use *enterprise* standards for design and development. Right now, multiple governmental infrastructures exist for data input, processing and payment. This makes it difficult for the user to be confident that statewide standards and adequate security have been applied to all the applications available for selection from the Web pages since the applications appear so different on the screen. Consistent design for applications coming onto the portal would improve the ease of use for the public, businesses, and government entities, and would increase confidence levels in the integrity of the state data.

The fact that each government entity’s own interests and needs are the central focus for systems development makes a comprehensive statewide solution elusive at best.



Local and state government should have a coordinated approach to e-government service delivery and operation. Having a single face of government will ease the Texas citizens' burden in conducting government business and assure them that they are, in fact, doing business with the State of Texas. Creating this "single face" will necessitate integrated planning between levels of government that have not previously had active interfaces for operation and service delivery. Open communication between governments will facilitate interaction among citizens, businesses, and government.

Enterprise-wide, integrated planning horizontally (among agencies within the same Appropriation Article or with government bodies that provide the same function at a local level) will result in:

- Realizing economies of scale for obtaining computer equipment, software, and services to build Internet systems.

- Sharing processes and systems across functions, so that we do not have to reinvent the wheel.

- Reducing redundancy of effort.

- Focusing on what the citizen needs, not what the government entity needs.

The first issue to be considered in providing a single approach to e-government service delivery is Web site branding to distinguish TexasOnline pages from other non-portal pages. This differentiation will build public confidence in online transactions over the Internet by assuring citizens that sites with the TexasOnline brand are official sites. Currently the accepted form of authentication of a government site is the domain name. The form "[agency initials].state.tx.us" has been reserved for use by state agencies. As more government services and payments for those services are provided online, the risk of hackers hijacking a site will increase. The portal has implemented safeguards to communicate basic data about the information and address of a TexasOnline Web site and protect the site from intruders. Effective use and management of portal branding could provide further validation, so that links to and from the site are well known and become an easy visual reference for users.

Promoting the Use of the Portal among State Agencies

In order to realize the full benefits of the state's investment in TexasOnline, agencies should consider the portal first when bringing government services to the Internet. Both government enterprise and the individual state agencies will gain from the migration of systems to the portal from individual state Web pages. Benefits will include:

- Expanded customer service base;

- Improved operating efficiency;

- Expansion of services available through the portal;

- Potential project development cost savings to agencies through allocation of resources generated through use of the portal; and



Savings from utilizing a common payment module that will lower the risk of failure (loss of funds) and improve accountability over funds (all necessary data can be collected for audit trails). An enterprise (statewide) payment system also makes payment simpler and easier for the end-user (citizen, business, or government users).

As each new function is analyzed to see if it can be moved to the Internet, agencies should reengineer and restructure the supporting internal processes. All requirements, forms, and paperwork should be examined to streamline that which is necessary and eliminate that which is not.

Portal Awareness across Texas

Regardless of the varied views and definitions for the nature and uses of a state portal, almost universal agreement exists regarding the benefits to be gained by developing the portal to serve as a single entry point for online government services. TexasOnline provides a single Internet entry point where citizens and businesses can:

- Access government information through a straightforward, intuitive interface;

- Obtain information that is categorized by function – such as vehicle registration, tax filing, and business filing – not by government entity;

- Conduct online transactions with government in a secure environment; and

- Gain access to multiple services and functions of government with a single authentication point or process, i.e. a citizen is only required to identify himself or herself once, not for each specific request for information or transaction.

In order to raise awareness about the availability and functions of TexasOnline, a communication campaign should be developed that is targeted to two distinct groups:

- Citizens and businesses who can access government services through the portal; and

- Government entities that can improve access and operational performance by making services available through the portal.

Additional information on the issue of seamless government can be found in Appendix H.

Recommendations

- 3. (TF) The new governing body should establish a team to discuss and resolve major issues related to commonality and cohesiveness of design for delivery of government services through TexasOnline.** This team should be comprised of representatives from each of the following:

- State agencies and universities (large and small);

- Local government entities (city, county, etc.); and

- Various user and business communities.



Leadership representation in the team would provide both input from the Legislature and a knowledge exchange opportunity from the team to the Legislature for program support and resource allocation.

Establishing a forum for input from this diverse group will help insure that government systems available through the portal are planned and integrated across agencies and levels of jurisdiction.

4. **(STATE/TF) The new governing body should establish a TexasOnline brand for the Web site, and establish policies and procedures for organizations providing government services through the portal to show the brand on their Web pages.** The governing body should ensure the integrity of the brand by taking the necessary precautions against unauthorized use.
5. **(LEG) The Legislature should provide guidance that each state agency must consider the portal for all planned Web applications that include financial exchanges and/or authentication.** All agencies should consider using the portal for their Web applications that include stringent security requirements. Agencies who choose not to use the portal for applications with financial, authentication, or high security requirements must be able to demonstrate, through such review and approval processes as the Biennial Operating Plan, that security, disaster recovery, privacy and lower costs are at least equivalent to the services and costs available through the portal.
6. **(TF) The new governing body should promote the use of the portal and provide information to the public, communities, governmental entities, and state leadership through outreach efforts to ensure :**
 - Citizens are informed about how best to use the portal,
 - Government agencies have help available to improve their utilization of the portal,
 - New applications are publicized adequately so that anticipated transaction volumes are realized; and
 - Future applications are designed with a uniform look and feel.

The outreach campaign should include information for government entities within Texas as to the services available and potential benefits of the portal.

SECURITY

The portal will deal with citizens' financial and personal information and, thus, must address security. Securing a portal necessitates an enterprise approach. The security risks must be analyzed from the top down, collectively examining the different levels that make up the portal: the network, the applications or services, the storage, and the transactions. Security needs vary depending upon the level and application. For example, hacker attacks, such as Web site graffiti and denial of service, can occur at the network level, unauthorized access



attacks can occur at the application level, and session stealing - where an unauthorized user takes over a live session - can occur at the transaction level. To combat such attacks, security mechanisms such as software packages, firewalls, and intrusion detection systems are put in place. The portal has a greater security challenge than a regular Web site, for it must be able to provide an adequate level of security for a wide array of services - from online database searches to online license purchases using a credit card.

The portal needs to ensure appropriate levels of security for the initial pilot agency services, as well as those that will come on in the future. Therefore, the main issues for portal security include:

Accountability, which is critical to establish the relationship between the contractor, the contract manager, and the participating agencies so that it is clear where security responsibilities lie.

Security standards for the pilot agencies, as well as future agencies that want to utilize any or all pieces of the portal framework, are crucial to ensure the security of the portal. Since the portal provides multiple hosting and connectivity scenarios whereas services can be hosted within an agency as well as being hosted on the portal, security requirements are necessary to protect all application operating through the portal.

Security reporting procedures which are essential to prevent intrusions and attacks from going undetected. Security monitoring reports are valuable for analyzing the efficiency of the tools used in providing security for the portal.

Additional information on the issues of portal security can be found in Appendix I.

Recommendations

7. **(TF) The governing body should establish a security policy relating to the use of the portal.** The security policy should be an extension of the state's existing security policy, addressing the specific issues related to the specialized functions and environment of TexasOnline. The policy should contain:

Extension of the DIR standards to include portal security at all levels.

Detailed accountability roles explicitly outlining the security responsibilities at each level, thus ensuring that each entity involved in the partnership is aware of their particular security responsibilities. For instance, an agency should know where the state network (TEX-AN) security responsibility ends, and the agency security responsibility begins.

Formalized procedures for coordinating with the OAG, the SAO, DPS and DIR on reporting intrusions and detecting fraud.

8. **(STATE/TF) The new governing body should coordinate with the SAO and DIR to require periodic security audits of the portal operational facilities.** This audit should



incorporate the ongoing internal reviews conducted by the Portal Management Office and security reports generated during daily operation of the portal. The audits should examine the security monitoring reports and processes and recommend necessary actions. In the interim, monthly reports on intrusion detection should be provided to the new governing body, DIR, and SAO for internal monitoring.

PRIVACY

In an ever-growing electronic world, commodities and services seem abundant, but some believe this has created a major threat to individual privacy. A variety of entities are using data matching techniques called “clickstreams” to match online data with offline data – for example, by matching names from a Web site with addresses from invoices. Accomplishing this provides a remarkably detailed dossier on an individual. Stories in the media on the disintegration of personal privacy may scare consumers from using the Internet for purchasing goods and services. The portal will have to overcome this potential distrust of online transactions and convince users that e-government in Texas respects their personal privacy.

The United States, Canada, and Europe have accepted five core principles to privacy protection. These five principles are referred to as the Fair Information Practice codes:

Notice – Consumers should be given notice of an entity’s information practices before any personal information is collected from them.

Choice – Consumers should be given options as to how any personal information collected from them may be used.

Access – Consumers should be able to access data about him or herself and to contest that data’s accuracy and completeness.

Security – Data collectors must take reasonable steps to ensure data security and integrity.

Enforcement – A mechanism for enforcement must be in place for the fair information codes to be effective.

Texas already has an information practices system in place, which provides privacy protection for personal information in certain government records. However, the Texas Public Information Act (PIA) of 1973 offers little privacy protection for the average citizen in Texas. Very little data collected by the state is deemed of no legitimate concern to the public. This has led to the growth of commercial resellers of the personal information of Texans. Recent public surveys have found the public concerned and surprised that the state releases their personal information. The PIA must be revised in order to provide the privacy protection that citizens expect as they visit TexasOnline.

The main federal privacy law is the Privacy Act of 1974. This Act does not address privacy at the state level, but gives individuals the right to access and correct information held by the



federal government. Nine state governments have passed similar legislation. The United States trails behind Europe, Australia, Canada, and other nations in the protection of personal information held by governmental entities.

Additional information on the issue of privacy and its role in e-government can be found in Appendix J.

Recommendations

9. *(LEG/STATE)* **State agencies should be very deliberate about every piece of data collected on individuals**, and collect only that data for which there is a legitimate governmental need as determined by the agency's governing body.
10. *(LEG/STATE)* **Agencies should review the key identification information collected** and make sure that the information is kept according to established retention schedules, as needed for completing the transaction and subsequent audit needs.
11. *(LEG)* **Citizens should have the right to review and challenge the accuracy of the information collected** and held about them through TexasOnline.
12. *(STATE)* **Citizens should be provided clear and complete information about the privacy policies under which state agencies operate.** Privacy policies should avoid "legalese" and should describe why and how personal information is collected and how it is used.
13. *(STATE)* **Agencies must be held accountable for faithfully executing their privacy policies and the law.** This includes having strong security measures in place to safeguard private information against unauthorized intrusions and coordinate efforts with authorized third parties to perform unannounced annual checks of portal participating governmental agencies to ensure that privacy policies are being followed.

Privacy Commission

Texas does not have a general privacy law. Under the PIA, there is a presumption that all information collected and maintained by a governmental body is public information that is available and open to the public upon request. Some information is protected under the PIA, but in most circumstances, the law requires the release of the information. While there are approximately 580 statutes that specifically address the confidentiality of certain personal information in the custody of governmental entities, these statutes—in most cases—do not apply to all agencies.

Since each agency has different restrictions and policies concerning data management and the public disclosure of information, it will be difficult to put in place a general privacy statute that fully addresses this issue comprehensively, across all state government. Establishing a privacy commission, however, will provide the state with a central body



exclusively focused on ensuring the privacy, security and historical integrity of the personal information entrusted to government by the people of Texas. It will help agencies comply with applicable privacy rules and statutes. It will help to better inform Texans of their privacy rights. Coupled with the privacy recommendations mentioned on the previous page, the establishment of a privacy commission will place Texas at the forefront of addressing the privacy concerns of its residents.

The scope and authority of privacy commissions that have been either proposed or that currently exist in other countries varies. Some commissions are merely fact-finding organizations that report to a legislative or an executive body, while others have rule-making and regulatory authority. In the regulatory model, a public official enforces a comprehensive data protection law. This office is known as a Commissioner, Ombudsman, or Registrar. This official monitors compliance with the law and is responsible for public education on privacy.

The Task Force considered the following four organizational structures in developing this proposal:

- Interim legislative committee.

- Independent commission with rule-making authority.

- Commission with an independent Board attached administratively to an existing agency with rule-making authority. Possible “parent agencies” DIR, SAO, the Legislative Council, the Texas Ethics Commission, and the OAG.

- Commission with an independent board attached to more than one agency with rule-making authority. Recommendations of the commission would be adopted by reference by the parent agencies. The executive directors of the parent agencies would be members of the commission.

The following practices should be taken into consideration as possible responsibilities and practices for a Texas Privacy Commission:

- Establish privacy officers (POs) in state agencies to serve as the first points of contact concerning privacy issues in each governmental body. Privacy complaints would first be directed to an agency’s PO for resolution before referral to the Privacy Commission. The Privacy Commission would organize a conference with all POs two or three times a year to discuss current privacy issues. Responsibilities of the POs would be natural extensions of those currently performed by agency records management personnel.

- Develop a Personal Information Digest consisting of the personal information records kept by each agency, the purpose for which the records are kept, and the period of time the records are kept. The Privacy Commissioner would collect and maintain this information on an annual basis. This digest would be accessible to the public.



Recommendations

14. (LEG) The Legislature should establish a privacy commission that is authorized to:

Analyze complaints and assist government agencies routinely in complying with applicable privacy rules and statutes;

Educate the public on how to protect their privacy;

Provide a “Privacy Hotline” where individuals and government agencies can get general information and advice concerning their privacy rights under federal and state law;

Conduct policy analysis on proposed and existing legislation in concert with the OAG for privacy implications and conduct research into technological and social developments that can affect personal privacy;

Meet with agency “privacy officers” on a regular basis to discuss privacy concerns of agencies and to determine compliance with the PIA and applicable privacy rules and statutes; and

Study the legal, fiscal, and procedural ramifications of implementing a statewide “opt-in” privacy policy.

AUTHENTICATION

Authentication is the process of positively verifying the identity of a user, device, or other entity in a computer system, often as a prerequisite for allowing access to resources in a system. Authenticating the identities of transacting parties in an online environment is not a trivial task for state and local government organizations.

Methods to provide authentication are based on three types of verification: identification based on something one knows, identification based on something one has, or identification based on something one is. They may be used together to provide higher levels of security and to mitigate the disadvantages of one category with the advantages of another. For example, banks use personal identification numbers (PINs) (something you know) combined with a magnetic card (something you have) to provide two levels of authentication for access to automated teller machines (ATMs). The key in protecting information on the Internet is choosing the proper security mechanism for the transaction. The type of security mechanism used will depend on what and how the information is being exchanged.

Digital signature technology is currently available as one method of authentication, DIR has adopted a rule regarding the use of acceptable digital signature technologies for state agencies (1 Texas Administrative Code 201.14). State adoption of this technology has been fairly low to date. To realize the potential of digital signatures for validating the sender and content of electronic messages, standards and policies should be in place across state government for levels of authentication required. This is necessary so the state can avoid



requiring people to obtain multiple digital signatures, and go through multiple procedures for obtaining such signatures. Defining levels of authentication and establishing procedures for users was too difficult for the Demonstration Project; participating agencies identified other means of authenticating users, or preferred to start with a simpler application that did not require such a high level of authentication.

Aside from the issues regarding digital signature implementation, the identity of individual citizens to a transaction may not, in fact, need to be authenticated. If authentication is required, several options are available. In April 2000, DIR enacted a rule and guideline addressing standards and policy issues related to state Web sites. One of the requirements is for agencies to conduct a “Transaction Risk Assessment” to determine which level and type of authentication is appropriate for a given transaction. While digital signatures are a common way to ensure authentication, there are other alternatives that may not impose the need to acquire a digital signature onto the public and that will serve as an appropriate authentication method, such as the use of a PIN number.

Recommendations

15. *(LEG/STATE/TF)* **The new governing body should work with DIR to establish an electronic standard (based on the public key infrastructure) for the use of digital signatures in online transactions.** As part of this effort, clear authority, responsibilities, and processes should be defined for issuing certificates for the state, and what levels of authentication are necessary. Contracts with either public or private organizations that specialize in Internet authentication should be considered to provide a standard, safe, private, and reliable service for citizens and businesses.
16. *(LEG/STATE)* **The Legislature should require agencies to review their forms and requirements when planning for new Internet service delivery systems.** Agencies should determine the appropriate level of authentication, eliminating unnecessary requirements and choosing a level of authentication that corresponds to the business need.

NOTARY AND THIRD PARTY SIGNATURE REQUIREMENTS

In the same manner, third-party signatures are also sometimes necessary to certify that an applicant has completed required work. Moving these relationships into the online world is not easy at this time. There is no simple way to route a document via the Internet through multiple parties for validation, even with a requirement for the parties to have a digital signature. Notarization or acknowledgement of signatures is required for certain documents, including some documents that must be filed with the state. Section 406.013, Government Code, which deals with the seals required to be used by notaries public, requires the seal be affixed by a seal press or stamp that embosses or prints the seal. The requirement for an embossed seal obviates use of electronic notarization or acknowledgement, both of which



are allowed by the federal Electronic Signature Act and the model Uniform Electronic Transactions Act (UETA). Similarly, Section 121.004, Civil Practice & Remedies Code, requires the appearance of the grantor or person executing an instrument for recordation before certain officers (district court clerks, county court judges and clerks, notaries public and county tax assessor-collector employees) for acknowledgement before the instrument can be filed. The requirement of physical appearance for acknowledgement in the state law conflicts with electronic acknowledgement that is otherwise allowed under the Electronic Signature Act and UETA. This limits the ability of governments to enable electronic submittal of many documents.

The second concern with notarized and third party signatures is the extent to which requiring such a signature is an artificial barrier. If an agency is requiring this type of signature, it may have evolved over time and that level of validation may not actually be necessary or useful to the transaction in the present day. Some state agencies may require notarization of documents required to be filed with the agency even though state law does not require notarization. This impedes the ability to file the document electronically since Section 406.013, Government Code, requires affixation of an embossed seal on the notarized document. Agencies should review the need for notarized documents if state law does not require notarization to determine whether the agencies want to continue requiring notarized documents.

Recommendations

17. *(LEG/STATE)* **The Legislature should amend Section 406.013, Government Code, and Section 121.004, Civil Practice & Remedies Code, to provide an exception for electronically notarized documents to the requirements for embossed seals and appearance before acknowledging officials, respectively, so that electronic notarization can occur.** This change is consistent with the federal Electronic Signature Act and UETA, both of which allow electronic notarization.
18. *(STATE)* **State agencies should review their requirements for notarization of filed records in instances where state law does not require notarization to determine whether the agencies want to continue requiring notarization.** It may be that notarization is no longer necessary or useful to the transaction and could be discontinued.

ACCESS ISSUES AND THE DIGITAL DIVIDE

The Task Force acknowledges that the portal will not reach its full potential if a portion of the Texas population does not have access to the Internet. This report explores four major barriers to Internet access: Geographic Barriers, Economic Barriers, Language Barriers, and Disability Barriers.



Being a traditionally agricultural state, Texas has a large rural population. Some rural areas have poor telecommunications infrastructure and thus may have expensive Internet access. Poor infrastructure can result in a lack of local Internet Service Providers (ISPs) for the area. If there are not ISPs in the area, Internet users pay for access fees and high long-distance charges. According to the “E-Government Services and Computer and Internet Use in Texas” study conducted for the Task Force by the University of Texas at Austin, the rate of Internet use in Texas’ urban and rural areas are about the same. This demonstrates that despite the high costs and unreliable service, rural Texans recognize the Internet as being relevant part of their lives. The telecommunications infrastructure needs to be extended to the rural communities of Texas in order to improve the quality of service and allow a larger percentage of Texas’ rural population to use the portal.

Texas enacted House Bill 2128 (74th Legislature) to help address the geographic barriers associated with Internet access. This provided reduced telecommunications costs for certain eligible entities. Furthermore, Senate Bill 560 (76th Legislature) instructed the Public Utility Commission of Texas (Commission) to evaluate the availability and the pricing of telecommunications and information services – including interexchange services, cable services, wireless services, and advanced telecommunications and information services – in rural and high cost areas. The Commission’s report is expected to be filed with the Legislature by January 1, 2001.

Low-income families suffer from the economic barriers of affordability. If one cannot afford the basic necessities, it is unlikely that one will purchase a computer and Internet service. In addition to providing Internet access locations, the state needs to conduct a marketing campaign to low-income groups on the usefulness and relevance of the Internet. Such a campaign will promote general use of the Internet and in turn the use of the portal.

Texans are a people that represent a variety of ethnic and cultural heritages. The Spanish speaking population in Texas is expected to represent 35%-40% of all Texans by the year 2010.⁴ The high percentage of Spanish speakers and the close connection with Mexico necessitate a Spanish version of the portal. The Latino population is not the only growing minority population in Texas. The Asian population, especially the Vietnamese and the Chinese communities, is expected to double in size by the year 2025.⁵ Although there may not be an immediate need to translate the portal for these populations, the need may arise in the future.

In order to make the portal accessible to those with disabilities, it is essential that participating state agencies follow DIR’s rules on Web site design. In addition, an adoption of a new technology, called voice portals, may increase accessibility to all the fore-mentioned populations. When used with Integrated Voice Response systems (IVR), voice portals make it possible for anyone with a telephone to access the Internet using a voice-activated Web service.

The exploration of these issues has resulted in the realization that the Internet will transform government access and in many cases will become the primary channel to obtain service and information. The “bricks and mortar” government of today will be able to direct additional resources toward their core mission. Because 40% of Texans do not have access to the



Internet, government cannot solely provide services online. Unlike private businesses that are able to market to and serve a specific group of people, government has a responsibility to provide service to all citizens and businesses in its jurisdiction. As Texas government moves more applications and functions online, it should not demolish the traditional channels of service. Texas must be sensitive to the fact that many of its “customers” do not have access to the Internet.

Additional information on the Internet access issues can be found in Appendix K.

Recommendations

Geographic Barriers

The following are possible solutions to address geographic barriers with respect to the portal:

19. **(LEG) The Texas Legislature should extend the incentive regulation rates for electing telecommunications companies under House Bill 2128 (74th Legislature).** These rates apply to schools, public libraries, not-for-profit health centers, and telemedicine projects. Extending the rates will help avoid an immediate cost impact to the eligible entities and will continue to provide public means to access online systems.
20. **(LEG) Offer tax incentives to companies and research and development firms that develop and implement new and innovative technologies and devices,** such as wireless networks and low cost Internet computers, that make accessing the Internet easy and inexpensive for those in rural areas.
21. **(STATE) Promote opportunities to leverage rural telecommunications volume to reduce costs of providing services to those communities.**
22. **(TF) Develop policies and procedures for government entities when participating in TexasOnline,** including abiding by DIR rules on designing state Web sites.

Economic Barriers

An array of economic barriers may impede on the success of the portal. The following are possible solutions that may curtail or eliminate these barriers:

23. **(LEG) Offer tax incentives to businesses that donate Internet-ready computer equipment, training, or discounted/free broadband access lines** to schools, libraries, and other public entities.
24. **(TF) The Task Force should collaborate with the Electronic Benefits Task Force** to explore the possibility of allowing eligible recipients of the EBT Lone Star Card to use the card for financial transactions on TexasOnline.



25. **(TF) Collaborate with a private financial services firm for a credit/debit card program.** This will allow those without credit cards access to the portal while serving as an e-government marketing mechanism for the state.
26. **(TF) Provide other methods of online payment for those online portal applications that only accept credit cards.**

Language Barriers

The following are possible solutions to address language barriers with respect to the portal:

27. **(TF) Explore the opportunity to use the portal as a gateway to Latin America.** Texans can use the portal to access necessary business information, while Latin Americans can use it to access Texas business regulations and tourism information.
28. **(TF) Require participating TexasOnline government entities to be sensitive to special language, visual appearance, and navigational demands** of their customers and to accommodate citizens' needs as they arise.

Disability Barriers

Making the portal accessible to people with disabilities is a difficult but necessary proposition. The following are suggestions in making the portal more accessible to those with disabilities:

29. **(TF) Develop policies and procedures for government entities when participating in TexasOnline,** including abiding by DIR rules on designing state Web sites (1 Texas Administrative Code 201.12).
 - (TF) Include an instructional page for users with disabilities through a link on the home page. This page can be called "Accessibility Assistance." Include a list of access keys that users can utilize to navigate the site on this page.
 - (TF) Provide contact information in the case that users encounter barriers to accessing any or all of the portal.
 - (TF) Have participating TexasOnline applications tested by a variety of Texans with and without disabilities to ensure that all are usable and accessible.
 - (TF) Direct government entities participating in the portal to online disability accessibility testing programs.
30. **(TF) Establish an Integrated Voice Response system (IVR) or alternate technical solutions** for those members of the population who are not able to access TexasOnline in the traditional fashion.



FUNDING OPTIONS

DIR conducted a Survey of State Agency Initiatives and other additional research for the Task Force, identifying various methods of funding for the portal, and collecting information regarding the models' usage and issues. The tax-funded model, the cost savings model, and the self-supporting model are the three options that have been identified to fund the portal.

In the **tax-funded model**, the portal would be supported by tax dollars appropriated by the Legislature. Over 55% of Texans surveyed found the use of tax dollars to support e-government unacceptable.⁶ Business executives in Texas also showed a lack of enthusiasm for this method of funding.⁷ While Texans did not support this method of financing the portal, both Pennsylvania and Iowa have adopted the tax-funded model. These states do not approve of the use of transaction charges and similar fees, stating that citizens have already paid for such systems and should not be charged again. In Pennsylvania, users pay no more for the service than if the transaction was completed through the traditional paper processes.⁸ Florida is another state that is using the tax-funded model initially. Florida is appropriating \$2 million in FY 2000-2001 to begin development of Florida's Internet portal, while exploring other funding options for the future.⁹ Massachusetts has also chosen a tax-funded model, using bonds. In 1996, Massachusetts issued \$310 million in bonds for spending in three categories: public safety, education, and better government. Of the total, \$175 million went towards "better government," which included setting up an e-mail so state agencies can shop online for products they needed.¹⁰

The **cost savings model** is not being currently used by any state government surveyed, but has been identified as a proposed model. Projected savings that an agency will attain (by delivering applications and services online) are used to fund the portal. Even if this is proven as a viable model in the future, initial funding for development of the portal is still needed and such funding can only be appropriated by the Legislature.

The **self-supporting model** can encompass one, some, or all of the following options to fund an e-government portal: agency subscription fees, the resale of data, customer transaction/convenience fees, premium services, payment processing fee by transaction, and advertising. All of these options, except advertising, were presented to Texas state agencies in the Survey of State Agency Initiatives. This survey found that state agencies did not have a high acceptance of any of outlined self-supporting options. The options are outlined below.

Agency subscription fees - The agency pays a subscription fee to have applications on the state portal. The amount of the subscription fee would be dependent on the size of the application and its activity volume. Large Texas state agencies are more inclined or able to pay agency subscription fees.¹¹ This model is similar to the tax-funded model previously discussed, since dollars appropriated to the governmental entity are used to participate in the state portal.

Resale of data - This option assesses no fee to the agency, but instead allows the portal development vendor to act as an information broker and resell the agency's currently



public data repackaged into a more easily used format to address the user's specific needs. This was the least popular method of funding for both state agencies and business executives.¹² Likewise, over 60% of Texans found the selling of state data for financing e-government highly objectionable.¹³ With the high profile that privacy is given in the media and the privacy initiatives on the federal and state level, it is unlikely that this will be a viable funding option in the future.

Customer transaction/Convenience fee by application – This fee is assessed to the customer per transaction for the speed and convenience of using the portal (as compared to traditional means like regular mail or in-person visits to the agency). Transactions or convenience fees were found the most accepted method of funding by Texas state agencies.¹⁴ In addition, almost 80% of Texans found these fees either entirely acceptable or somewhat acceptable.¹⁵ Despite wide public acceptance, agencies should be cautious - if convenience fees are too high, the result could be low usage of the service via the portal. Arizona discovered this when the majority of the complaints in their "comments" section of the site were about the \$6.95 transaction fee for motor vehicle registration. In less than a year Arizona eliminated the fee and witnessed electronic registration renewals increase by 21%.¹⁶

Premium services - This fee is charged to individuals or businesses regulated or served by a governmental entity and includes personalized, tailored services and access to repackaged data specific to the user's industry. For example, automatic reminders about soon-to-expire licenses and permits might be sent to users of premium services. Other examples include providing specialized forms to assist the customer with their government interactions. There was a division of opinion on the usefulness of premium services from business executives.¹⁷ Such division indicates that widespread support for premium services will depend on the details of the plan. Using premium services has not proven to be a widely accepted or proven method of funding a state portal.

Payment processing fee by transaction - The governmental entity pays the payment fees for all transactions that require the use of the payment portal. This option assesses a transaction fee paid by the agency for each transaction provided. Because the governmental entity would pay for all transactional fees, this model mirrors the tax-funded model previously discussed.

Advertising - An advertising firm leases space on the portal for advertisement placement. Companies placing ads pay a commission for products and services attained through the ad. The advertising firm and the governmental entity share the revenue from the commission. The revenue generated is then used to offset the cost of implementing e-commerce applications. Advertising was also a popular method of funding e-government among business executives.¹⁸ Such high acceptance could be due to the widespread use of advertising on corporate Web sites. Because advertising is a relatively new and controversial medium of funding government portals, the issue is explored more extensively below.



Advertising Issue

The use of advertising as a funding method presents a quandary. While advertising generates a potential revenue stream to the state, many states are using caution before placing advertisements on their sites. States like Kentucky, Minnesota, and Kansas are not allowing advertising on their Web sites for the time being. Other jurisdictions, namely the City of Honolulu and the Ohio Bureau of Motor Vehicles, have recently contracted with a vendor to have advertising on their sites. In the surveys completed for the Task Force, about 75% of Texans found advertising either entirely acceptable or somewhat acceptable in funding e-government.

Advertising on a state site brings up the following issues:

- Censorship vs. freedom of speech;
- Question of control;
- Implied endorsement from the state; and
- Servicing the citizen vs. servicing businesses.

The first major issue surrounding advertising concerns the appropriateness of the ads. Who makes the determination of what types of advertising will occur on the site? One online advertising firm addresses this problem by only contracting with advertisers who offer products and services that can be purchased by individuals of all ages. This firm does not allow pornography, alcohol, tobacco, and political, religious, or issue-oriented advertisements on government Web space that they lease. While this seems to be an answer to the question of appropriateness, the state could be responsible for violating the freedom of speech under the First Amendment. In addition, if the state decided to set guidelines on what can and cannot be placed on the state portal based on appropriateness, how is the state to know what is not controversial to a single citizen for whom the product or service is advertised?

In the event that these background questions are answered and guidelines are established, there is still no guaranteed means of filtering out inappropriate advertising from the state portal. There is always a chance for human error. Such human error can be demonstrated with an incident involving an Internet advertising company, DoubleClick.

Brown-Forman Corporation, the makers of Jack Daniel's whiskey and Southern Comfort liquor, hired DoubleClick to place advertisements on sites that would reach the typical drinker. An administrative mistake by a clerical worker at DoubleClick caused the ads to run for several weeks on United Media's Comics.com site, the home page for Ziggy, and Snoopy.com. These sites prohibit alcohol advertising because of their family appeal.¹⁹ While a state-contracted advertising firm may have an amazing record of accuracy, the possibility of human error always remains.

The question of control is the second issue surrounding advertising on the portal. Advertising firms that lease space on the portal have the right to place any type of advertisement on the site. There is also a probability that banner advertisement re-directs may result in the user being linked to dubious or problematic Web sites. Privacy violations



are also a concern as some Web sites record user information and activities by using cookies. Once the user clicks on an advertisement, he or she will be transferred to a page outside the portal, yet the user may assume that these pages are connected to the portal and its privacy policies. Any contract with an Internet advertising firm must address who has control over the types of advertisements placed on the site. If the firm is leasing space on the portal, the governing board must be given a role in choosing the advertisements that are placed on the site.

The third issue that makes advertising controversial is the appearance that advertisements on the state portal may appear to be endorsed by the government. State and local governments must place an understandable and recognizable disclaimer on all sites that include advertising, especially in the cases where the companies advertising are not based in the State of Texas. A perceived government endorsement of out-of state companies can cause uproar from companies based in Texas. Endorsement of one company over another can also create the same result.

Pennsylvania serves as an example of a state that is currently entangled in the endorsement issue. Pennsylvania has collaborated with Microsoft to allow users to check weather and news, set-up e-mail accounts, design simple Web pages, and utilize other services. Local Internet businesses are concerned, contending that “through its Web site, Pennsylvania is using tax dollars to enable Washington-based Microsoft to compete against local companies.”²⁰ The Pennsylvania case raises the question, “Should the State be providing marketing opportunities for select big businesses?”

The final issue of citizens vs. businesses can also be demonstrated by the Pennsylvania case. Like the local businesses in Pennsylvania, some state officials around the country argue that accepting advertisements on a state portal violates the philosophy that the portal is providing a service to the citizen and enhancing the citizen’s experience in the democratic process. Placing advertisements does not necessarily provide services to the citizen, and it does not promote participation in the democratic process. Lieutenant Governor Gary Sherrer of Kansas argued that, “. . .we have an obligation to not just sell our Web site to the highest bidder.”²¹

The lack of industry standards and guidelines regarding the “best practices” in Web advertising make it difficult to determine how to best use advertising as funding for the state portal.

The Texas Funding Model

The Texas funding model is designed to accommodate many of the funding options described above. Texas state agencies can choose to participate according to any of the models above; funding projects, for example, by using a convenience fee or by using funding from agency budgets. The model needs to have this flexibility in order to accommodate the needs of the individual agencies’ clients – some applications, such as a license renewal, may lend themselves more easily to a convenience fee than other applications. Local governments who wish to participate must also be free to select their



funding mechanism and participation needs, as their requirements fall outside of state government needs.

However some applications are funded, it is clear that there will be services or applications that should be offered for free to citizens in order to meet public needs. There must be a way to fund the provision of these applications online, as the providing agency or government may be unable to fund the development and maintenance of the application.

One potential source for enabling more services is through re-investing the return on investment from the portal. Beginning in Fiscal Year 2002, the state receives 10% of the gross revenue received, and shares the net revenue on a 50/50 basis after the vendor's expenses are recovered. At present, any funds received from this allocation would be sent to general revenue. Using these funds to re-invest in portal development would allow additional applications to be placed online where there are no funds for the application development and where a convenience fee could not be imposed or would not support the development and ongoing maintenance costs for the application.

The funding structure is not designed to create a large pool of revenue for the state, but rather simply to recover the costs for operations and maintenance, and eventually to provide some additional resources for providing more services online. Part of the structure of agreements with individual agencies is the ability to reconsider the convenience fees or other funding methods over time, lowering or removing the charges based on the amount of money being generated. To ensure cost control, the Task Force (or subsequent governing body) must approve the fees and charges, and have the responsibility of reviewing the contractor's budget and expenditures.

The state has incurred costs in a number of areas as TexasOnline moved from the "drawing boards" to reality. Computer and networking equipment and software were acquired and installed to provide the basic technical infrastructure for the portal. Software was developed, tested and implemented to support the portal and assist agencies in bringing services online. The project involves the state's partner, KPMG, and several sub-contractors, including the West Texas Disaster Recovery and Operations Center, so there are contracted services costs as well. The types of costs incurred include:

- Hardware;
- Software;
- Telecommunications;
- Outreach services, such as marketing;
- Call center operations; and
- Staffing (for private sector partners only).

The costs for these services will run into several million dollars, excluding the costs of any time, development, or staffing effort spent by the participating agencies (including DIR). TexasOnline is expected to operate as a "self-supporting" government service, with no direct appropriation of state or local government resources. The Task Force is monitoring the



economic viability of TexasOnline to ensure effective service delivery at the lowest possible cost. Budget information is provided to the Task Force on a monthly basis.

Recommendations

31. **(LEG) State revenue realized from TexasOnline should be designated for operation and maintenance of the portal and to assist in bringing other government entities onto the portal.** The new governing body should be directed to use these funds to provide additional services for free, and to evaluate the income stream to lower or reduce fees as appropriate (in conjunction with the affected agency).
32. **(LEG/TF) The portal funding model should be flexible** to include a combination of all the mentioned methods with consideration of the public willingness and governmental entity ability.
33. **(LEG) The Legislature should consider the use of advertising on TexasOnline.** Legislation should direct the portal governing body to develop an acceptable framework for the use of advertising, with coordinated support from the OAG, CPA, the Governor's Office, and the Legislature.

PAYMENT OPTIONS

Credit Cards

Electronic commerce on the Web relies heavily upon credit card transactions. State agencies must be prepared to accept credit cards and find ways to manage the fees charged in order for online government to succeed. Currently, however, many state agencies do not accept credit cards to pay fees and other charges. There are several reasons for this, including:

The credit card companies have rules that businesses must adhere to regarding card usage and charges. Fees are charged to a business when a card is used at a business, and these costs usually reflect a percentage of the total amount charged to the card (a merchant fee that ranges from 1-3% depending on the card contractor). Agencies must absorb the cost of these fees from their operational budgets, have the ability to set their fees to reflect their cost of doing business, or use a convenience fee as a separate means of cost recovery.

VISA and MasterCard do not allow a business or organization to differentiate between payment methods, so that the use of a convenience fee must be applied consistently across all methods of payment. Some card companies (including American Express, Discover) will allow a transaction surcharge as long as it applies to all credit cards accepted by the agency. This can limit the types of credit cards accepted online by agencies, as VISA and MasterCard cannot be offered in



conjunction with a lower-cost electronic funds transfer option unless the user pays the same convenience fee as they do for a credit card transaction.

If a customer disputes a charge, some credit card companies will credit their account automatically, removing funds from the state accounts without notification (a “chargeback”). This scenario can circumvent Texas laws requiring agencies to check the warrant hold system prior to initiating a refund. As a balance to this concern, however, the survey of Texas state agencies indicated that refunds or other payment problems were a very minor problem. As more applications go online involving direct transactions with the general public, however, the increase in credit card transactions may mean an increasing risk of chargebacks.

Before the establishment of the Texas model, there was no single state online payment system that was capable of processing a credit card payment method. Some agencies have setup up their own contracts for accepting credit cards, such as the DPS Criminal History Records. The creation of a payment processing system that can be used by any state or local government in Texas provides an opportunity for state agencies to take advantage of existing infrastructure without having to build or contract for their own system.

State agencies cannot impact their revenue stream because of their acceptance of credit cards, which decreases their incentive to use credit cards. Agencies need to determine how they will absorb credit card fees – whether it is by the agency or by a convenience fee. Agencies also need the flexibility to be able to increase their fees if they choose to recoup costs by building the cost of using credit cards into their fee structures.

Electronic Funds Transfer

The other major payment option offered by the Texas model is the ability to pay via electronic funds transfer (EFT). In this situation, the customer enters their banking account information to enable a funds transfer. For many entities making large and/or regular payments to the state, this option is more realistic than the use of a credit card. However, EFT has other barriers to implementation.

There is a need to educate agencies and customers about this method, and its benefits and risks. EFT has been used by the banking industry for some time, and currently the CPA receives approximately 75% of payments to the state via EFT. The ability to initiate this transaction spontaneously online is newer, and agencies are still uncertain about its implementation.

Similar to the acceptance of a paper check, there is no guarantee of the availability of funds. The banking system does not validate that the account has funds, or that the account exists – there is only a check to ensure that the check routing number is valid. This could pose a greater risk for agencies accepting large payments via online checking, however, in the survey of state agencies, the agencies indicated overwhelmingly that insufficient funds or returned check problems were minor, encompassing less than 1 percent of their payments received via check.



Recommendations

34. **(LEG) Enact legislation to allow agencies and, where appropriate, local governments to adjust the statutorily set fee to cover costs associated with conducting business online**, including the multiple fees charged for the transaction (e.g., transaction fees charged by credit card companies, processing fees).
35. **(TF) The new governing body for the portal should educate businesses and agencies on the electronic funds transfer option.** This option can provide some significant benefits to businesses and to agencies, and should be expanded as a method of online payment.

Conclusion

These recommendations are being made in order to make TexasOnline a success. Many issues will have to be addressed and many obstacles will have to be overcome; but the benefits are enormous, with the beneficiaries including the citizens and businesses of Texas, as well as all levels of government throughout the state.



List of Appendices

The following appendices are published separately in a companion document to this report and are available online from the Electronic Government Task Force's Web site (<http://www.dir.state.tx.us/egov/>).

Appendix A. Senate Bill 974 (76th Legislature)

Appendix B. List of Persons Who Testified Before the Strategic Issues Subcommittee

Appendix C. E-Government Services and Computer and Internet Use in Texas Survey Analysis

Appendix D. Texas Business Executive Survey Analysis

Appendix E. Survey of State Portal Initiatives Analysis

Appendix F. Survey of State Agency Initiatives Analysis

Appendix G. Senate Bill 801 (76th Legislature)

Appendix H. Seamless Government (White Paper)

Appendix I. Portal Security Issues (White Paper)

Appendix J. Privacy Issues Involved in Electronic Government (White Paper)

Appendix K. Internet Access Issues Involved in Electronic Government (White Paper)





Glossary

Accountability – Principle that responsibilities for ownership and/or oversight of automated information systems resources are explicitly assigned and that assignees are answerable to proper authorities for stewardship of resources under their control.²²

Attack – An attempt to bypass the physical or information security measures and controls protecting an automated information system. The attack may alter, release, or deny data. Whether an attack will succeed depends on the vulnerability of the computer system and the effectiveness of existing countermeasures.²³

Authentication – The process by which the user must identify himself or herself during the login or sign-on process. The authorization code made for the user may constitute an identification and password, used to protect against unauthorized access to data and system facilities.

Authorization – The process of giving individuals access to system objects based on their identity. Each user has an authorization profile that defines which systems and data the user will have access to and at what levels (read, write/update, delete, etc).

Automated Clearing House (ACH) – This is the location/business where all online checks are processed. The Automated Clearing House software allows any user with a checking account to submit payment by entering account information over the Internet. A deduction is then taken from the user's checking account. This is a very popular form of online payment.

Bandwidth – The amount of data that can be transmitted in a fixed amount of time. For digital devices, the bandwidth is usually expressed in bits per second or bytes per second(bps). For analog devices, the bandwidth is expressed in cycles per second, or Hertz (Hz).

Brick and Mortar – A phrase to describe a traditional company with non-Web channels as the sales outlet for its products or services.²⁴

Branding – An icon or symbol displayed on every Web page to identify the page as a part of the components of a system. Each page that has this brand is expected to have the same level of security and privacy as the home page of the application.

Broadband – Broadband service is a type of telecommunications technology that provides multiple channels of data via one communications medium. It allows the transmission of voice, graphics, and large text files without much difficulty. The FCC classifies broadband service as one that sends and receives data at four times the speed of a 56.6 kilobits-per-second telephone modem.²⁵ The following are the types of broadband services that exist:

Cable – Speeds range up to 10 megabits per second and is relatively inexpensive to operate. One disadvantage, however, is that systems need to be upgraded, which involves a year of replacing copper lines with fiber-optic lines in most communities.

Digital Subscriber Lines (DSL) – Provides computer users high-speed access over a telephone line. The downside is that the user must be within 12,000 feet of a telecommunication provider's central office.



Wireless cable and satellite – This technology is still relatively immature, but provides the best hope to rural and mobile Internet customers, as it does not require building or replacing infrastructure.²⁶

Certificate – A digital representation of information which (1) identifies the certification authority issuing it, (2) names or identifies its subscriber, (3) contains the subscriber's public key, (4) identifies its operational period, and (5) is digitally signed by the certification authority issuing it.

Clickstreams – In Web advertising, a clickstream is the sequence of clicks or pages requested as a visitor explores a Web site.²⁷

Cookies – A cookie is a mechanism that allows the server to store its own information about a user on the user's own computer in order to "remember" what pages it has sent to a user previously or anything about previous visits.²⁸

Data Confidentiality – Data that have been deemed confidential and are protected by privacy policies from release.

Data Integrity – Guarantees the data have not been changed since its last official update

Data Matching – Data matching is a process where multiple databases are merged together using a common identifier like a social security number. This allows the company or direct marketer to learn more about the consumer's hobbies, habits, interests and lifestyle, and market their product accordingly.

Data Mining – A class of database applications that look for hidden patterns in a group of data. For example, data mining software can help retail companies find customers with common interests.²⁹

Denial of Service – Result of any action or series of actions that prevent any part of an Automated Information System from providing data or other services to authorized users.³⁰

Digital wallet – Encryption software that works like a physical wallet during electronic commerce transactions. A wallet can hold a user's payment information, a digital certificate to identify the user, and shipping information to speed transactions.³¹

Electronic Benefits Transfer (EBT) System – A method of providing government benefits, such as cash assistance or food stamps, electronically instead of by paper. An example of this technology in the state of Texas is the Lone Star Card, an electronic transmittal of food coupons for families on welfare.

Electronic commerce (E-commerce; EC) – The use of communication technologies to transmit business information and transact business. Telephone business transactions and Internet commerce are forms of EC.³²

Electronic Funds Transfer (EFT) – The transfer of funds by means other than paper instruments, including Direct Deposit, Fedwire, automated teller machine (ATM), point-of-sale, and credit card transactions. Direct Deposit is the most widely used EFT program.³³

Electronic government (e-government) – Government activities that take place over a computer network, usually the Internet, between the government and members of the public. These activities generally involve the electronic exchange of information to acquire or



provide products or services, to place or receive orders, to provide or obtain information, or to complete financial transactions.

Electronic signatures – An electronic sound, symbol, or process, attached to or logically associated with a contract or other record, and executed or adopted by a person with the intent to sign the record.³⁴

E-mail – Electronic form of communication that allows one to both send message to and receive messages from anyone who has an e-mail account.

Enterprise – Enterprise operations means all encompassing data collection and processing. This refers to “state” level operations which cross all governmental boundaries or “agency” enterprise operations where the data and processing occur within a single agency.

Function-driven – A function-driven portal is one that does not require citizens to know whom they must contact for a transaction, (e.g., County Clerk, State Health Department, Department of Public Safety, etc.), but only know what they want to do (e.g., obtain a birth certificate or re-new a drivers license).

Hacker – Any unauthorized user who gains, or attempts to gain, access to an automated information system, regardless of motivation.³⁵

Hacking – Unauthorized use or attempts to circumvent or bypass the security mechanisms of an information system or network.³⁶

House Bill 2128 – This Bill was enacted by the 74th Legislature to address the geographic barriers associated with Internet access. It provides for reduced telecommunications costs for certain eligible entities.

HTML Code – Short for Hypertext Markup Language, the authoring language used to create documents on the World Wide Web.³⁷

Information Security – The result of any system of policies and/or procedures for identifying, controlling, and protecting from unauthorized disclosure, information whose protection is authorized by executive order or statute.³⁸

Interface – An interface is a set of commands or menus through which a user communicates with a program.³⁹

Internet, sometimes called simply “the Net,” is a decentralized worldwide system of computer networks where users can obtain information from any other computer (and sometimes talk directly to users at other computers).⁴⁰

Internet Protocol (IP) – The IP part of TCP/IP; the protocol used to route a data packet from its source to its destination over the Internet.⁴¹

Internet Service Provider (ISP) – A company that provides individuals and other companies access to the Internet and other related services such as Web site building and hosting.⁴²

Integrated Voice Response (IVR) – A system that allows the public to access or conduct business via selections made on a telephone. The user receives a series of prompts from which a selection can be made for the type of action the user wishes to take.

Intrusion – Any set of actions that attempt to compromise the integrity, confidentiality or availability of a resource.⁴³



Intrusion Detection – Pertains to techniques which attempt to detect intrusion into a computer or network by observation of actions, security logs, or audit data. Detection of break-ins or attempts either manually or via software expert systems that operate on logs or other information available on the network.⁴⁴

Intrusion Detection System (IDS) – A software package that collects information from a variety of system and network sources, analyzes the information stream for signs of misuse (attacks originating within the system or network) or intrusion (attacks or attempted attacks from outside), and reports the outcome of the detection process.⁴⁵

IP Splicing/Hijacking – An action whereby an active, established, session is intercepted and co-opted by the unauthorized user. IP splicing attacks may occur after an authentication has been made, permitting the attacker to assume the role of an already authorized user. Primary protections against IP splicing rely on encryption at the session or network layer.⁴⁶

Navigation – The movement of a cursor around the screen using a pointing device (mouse) or keyboard. The navigation bars on any screen contain information to help the user find desired documentation or to select a specific operation to occur.

Network – A group of two or more computer systems linked. Local-area networks (LANs) are one type of network in which the computers are geographically close together. Wide-area networks (WANs) are computers that are farther apart and are connected by telephone lines or radio waves.

Non-Repudiation – Assurance that the sender is provided with proof of delivery and that the recipient is provided with proof of the sender's identity so that neither can later deny having processed the data.

One-stop-shopping – A term that refers to a single entry point where citizens can access a variety of information and services. For TexasOnline this includes: statewide government information pages, perform searches for specified information, and initiate communications with governmental bodies.

Online chat – Real-time communication between two users via computer. Once a chat has been initiated, either user can enter text by typing on the keyboard and the entered text will appear on the other user's monitor.

Opt-in – The opt-in approach to data release leaves the burden of protection on the business or governmental entity. The subject of the information must give the organization the permission to use their data for other than the original purpose. If such permission is not given, the organization cannot release the subject's data to third parties or use it for purposes other than what it was intended.

Opt-out – The opt-out approach to personal privacy leaves the burden of protection on the subject of the information. The subject has to inform the organization that they do not want their information shared with third parties. If the subject does not give such notice to the organization, the organization reserves the right to share and sell the subject's data.

Outreach campaign – An outreach campaign is comparable to a marketing strategy. Outreach refers to how the end-users and state and local governments will be made aware that the portal exists, as well as any new online services that are developed and implemented periodically.



PDF formatting – PDF (Portable Document Format) is a file format that has captured all the elements of a printed document as an electronic image that you can view, navigate, print, or forward to someone else. PDF files are created using Adobe Acrobat, Acrobat Capture, or similar products.⁴⁷

Personal Information – Personal information can refer to a variety of data, including but not restricted to, one's name, address, telephone, tax history, social security number, credit card number, education, and credit history.

Portal – A portal allows organization (like state and local governments) to employ a single address (URL) through which the public receives customized and even personalized information as well as vital government services.

Privacy policy – A Web page that states how the site uses personally identifiable data collected from visitors. Most privacy policies discuss what information is collected, how it is used, and whether it is shared with others.

Public Key Infrastructure (PKI) – A set of policies, processes, server platforms, software and workstations used for the purpose of administering certificates and public-private key pairs, including the ability to issue, maintain, and revoke public key certificates.

Real time – The term is used to describe a number of different computer features that occur immediately. For example, real-time operating systems are systems that respond to input immediately. They are used for such tasks as navigation, in which the computer must react to a steady flow of new information without interruption.

Security – Refers to techniques for ensuring that data stored in a computer cannot be read or compromised. Most security measures involve data encryption and passwords. Data encryption is the translation of data into a form that is unintelligible without a mechanism. A password is a secret word or phrase that gives a user access to a particular program or system.

Security Audit – A search through a computer system for security problems and vulnerabilities.⁴⁸

Senate Bill 560 – This Bill, enacted by the 76th Legislature, instructed the Public Utility Commission of Texas to evaluate the availability and the pricing of telecommunications and information services – including interexchange services, cable services, wireless services, and advanced telecommunications and information services – in rural and high cost areas. The Commission's report is expected to be filed with the Legislature by January 1, 2001.

Senate Bill 801 – During the 76th Regular Session of the Texas Legislature, State Leaders recognized the need to move government information and services to the Internet. This insightful legislation anticipates the need to link and connect information from the citizen's perspective, not the agency perspective, and to provide basic mechanisms for communication and interaction across the Web.

Senate Bill 974 – The 1999 legislation charges the Department of Information Resources with “establishing a task force to assess the current and future feasibility of establishing a common electronic system using the Internet through which state agencies and local governments can accomplish the following types of functions electronically:



Send documents to members of the public and persons who are regulated by a state agency or local government;

Receive applications for licenses and permits and receive documents for filing from members of the public and persons who are regulated by a state agency or local government that, when a signature is necessary, can be electronically signed by the member of the public or regulated person; and

Receive required payments from members of the public and persons who are regulated by a state agency or local government.”

Session Stealing – See IP Splicing.⁴⁹

T-1 Line – The T-carrier system, introduced by the Bell System in the U.S. in the 1960s, was the first successful system that supported digitized voice transmission. The original transmission rate (1.544 Mbps) in the T-1 line is in common use today in Internet service provider (ISP) connections to the Internet.⁵⁰

Voice portal – Services that provide voice-activated Web-like services including stock quotes, traffic information, weather or movie tickets to people calling a 1-800 number.⁵¹

Web bugs – Web bugs are codes that can identify a particular computer and help advertising services far removed from the site determine whether electronic promotions are well-read and effective in prompting someone to buy a product. They often work with cookies to greatly enhance the ability of outside observers to track and analyze activity, most often without a computer user’s knowledge.

Web browser – A program used to view documents on the World Wide Web.⁵²

Web site – A Web site is a related collection of files that includes a beginning file called a home page. A company or an individual tells you how to get to their Web site by giving you the address of their home page. From the home page, you can get to all the other pages on their site.⁵³

World Wide Web – Usually referred to as the “Web,” is all the resources and users on the Internet that are using the Hypertext Transfer Protocol (HTTP).⁵⁴ The documents are formatted in a language called HTML (HyperText Markup Language) that supports links to other documents, as well as graphics, audio, and video files. Not all Internet servers are part of World Wide Web. There are several applications called Web browsers that make it easy to access the World Wide Web, two of the most popular being Netscape Navigator and Microsoft’s Internet Explorer.



Endnotes

¹ <http://www.texasonline.com>

² Texas Government Code ANN. 2054.062 (Vernon 1999).

³ Agarwal, P.K. "Portals: The Path to E-Everything." *Government Technology*. March 2000.

⁴ Texas. Comptroller of Public Accounts. Economic Update. Texas Population Estimates and Projection by Age, Sex, Race, and Ethnicity: 1990, 2000, 2005, 2010." Retrieved on 30 May 2000.

⁵ Texas. Comptroller of Public Accounts. "Lone Star Asians: Small but Growing Community Wield Influence in Texas." Retrieved on 12 June 2000 from <http://window.state.tx.us/comptrol/fnotes/fn9711a.html>.

⁶ Strover, Sharon and Joe Straubhaar. "E-Government Services and Computer and Internet Use in Texas." Telecommunications and Information Policy Institute. University of Texas at Austin. Commissioned by the Electronic Government Task Force. June, 2000.

⁷ Hill Research Consultants. "Texas Business Executive Survey." Commissioned by the Electronic Government Task Force. August 2000.

⁸ Combs, Dan. Director of Digital Government, Information Technology Department, State of Iowa. E-mail Interview. 30 August 2000. Hintze, Rhett. Executive Assistant to Pennsylvania's Chief Information Officer. State of Pennsylvania. E-mail Interview. 30 August 2000.

⁹ Carla A. Gaskin. State Technology Office. State of Florida. E-mail Interview. 5 September 2000.

¹⁰ Perlman, Ellen. "No Free Lunch Online." *Governing.com*. Retrieved on 6 September 2000 at www.governing.com/8ecom.htm.

¹¹ Texas. Department of Information Resources. Survey of State Agency Initiatives. Commissioned by the Electronic Government Task Force July 2000.

¹² Texas. Department of Information Resources. Survey of State Agency Initiatives. Commissioned by the Electronic Government Task Force July 2000. Hill Research Consultants. "Texas Business Executive Survey." Commissioned by the Electronic Government Task Force. August 2000.

¹³ Strover, Sharon and Joe Straubhaar. "E-Government Services and Computer and Internet Use in Texas." Telecommunications and Information Policy Institute. University of Texas at Austin. Commissioned by the Electronic Government Task Force. June, 2000.

¹⁴ Texas. Department of Information Resources. Survey of State Agency Initiatives. Commissioned by the Electronic Government Task Force July 2000.

¹⁵ Strover, Sharon and Joe Straubhaar. "E-Government Services and Computer and Internet Use in Texas." Telecommunications and Information Policy Institute. University of Texas at Austin. Commissioned by the Electronic Government Task Force. June, 2000.

¹⁶ Perlman, Ellen. "No Free Lunch Online." *Governing.com*. Retrieved on 6 September 2000 at www.governing.com/8ecom.htm.

¹⁷ Hill Research Consultants. "Texas Business Executive Survey." Commissioned by the Electronic Government Task Force. August 2000.

¹⁸ Ibid.



-
- ¹⁹ Kranhold, Kathryn. "To Dismay of All Involved, Liquor Ads Pop Up on Web Sites for Kids." *Wall Street Journal*. 8 May 2000.
- ²⁰ White, Jason. "Pennsylvania, Washington Take Different Paths to E-Government." 21 June 2000. Retrieved on 25 July 2000 from www.stateline.org/story.cfm?storyid=82768.
- ²¹ Richardson, Tim. "Advertising on State's Web Site Debate." *The Topeka Capital-Journal*. Retrieved on 23 August 2000 from www.cjonline.com/stories/081700/kan_inkads.shtml.
- ²² Glossary of Practices for Protecting Information Resources Assets.
<http://www.dir.state.tx.us/IRAPC/practices/index.html>
- ²³ Ibid.
- ²⁴ Harris, K. "E-Business Glossary: Version 1.0." COM-09-3988. The Gartner Group. 8 October 1999.
- ²⁵ Lieberman, David. "America's Digital Divide." *USA Today*. 11 October 1999. Retrieved on 25 April 2000 from <http://www.usatoday.com/life/cyber/tech/ctg382.htm>.
- ²⁶ Hayes, Heather. "The Need for Speed." *Civic.com*. May 2000. Pg. 32.
- ²⁷ <http://www.whatis.com/>
- ²⁸ Ibid
- ²⁹ http://webopedia.internet.com/TERM/d/data_mining.html
- ³⁰ Glossary of Practices for Protecting Information Resources Assets.
<http://www.dir.state.tx.us/IRAPC/practices/index.html>
- ³¹ http://webopedia.internet.com/TERM/d/digital_wallet.html
- ³² Harris, K. "E-Business Glossary: Version 1.0." COM-09-3988. The Gartner Group. 8 October 1999.
- ³³ <http://www.fms.treas.gov/eft/GENERAL.HTML#Introduction>
- ³⁴ Electronic Signatures in Global and National Commerce Act., Pub. L. S.761, 106th Cong. (2000).
- ³⁵ Glossary of Practices for Protecting Information Resources Assets.
<http://www.dir.state.tx.us/IRAPC/practices/index.html>
- ³⁶ Ibid
- ³⁷ <http://webopedia.internet.com/TERM/H/HTML.html>
- ³⁸ Glossary of Practices for Protecting Information Resources Assets.
<http://www.dir.state.tx.us/IRAPC/practices/index.html>
- ³⁹ http://webopedia.internet.com/TERM/u/user_interface.html
- ⁴⁰ <http://www.whatis.com/>
- ⁴¹ <http://www.computeruser.com/resources/dictionary/index.html>
- ⁴² <http://www.whatis.com/>
- ⁴³ Glossary of Practices for Protecting Information Resources Assets.
<http://www.dir.state.tx.us/IRAPC/practices/index.html>
- ⁴⁴ Ibid.
- ⁴⁵ Ibid.
- ⁴⁶ Ibid.



⁴⁷ <http://www.whatis.com/>

⁴⁸ Glossary of Practices for Protecting Information Resources Assets.
<http://www.dir.state.tx.us/IRAPC/practices/index.html>

⁴⁹ Ibid.

⁵⁰ <http://www.whatis.com/>

⁵¹ Borland, John. "Tellme, Others Open Up the Telephone Web." *CNET News.com*. 14 June 2000.

⁵² Freedman, Alan. *The Computer Desktop Encyclopedia*. (Point Pleasant, PA: Computer Language Company Inc., 1996), 937.

⁵³ <http://www.whatis.com/>

⁵⁴ Ibid.